PROFESSIONAL EDUCATION PREPARATION PROGRAMS'

CONTENT GUIDELINES FOR STATE CONTENT EXAMINATION and/or DPI PROGRAM APPROVAL

Content knowledge assessment will be developed according to standards adopted by the state superintendent from recommendations by the professional standards council as required under s. 115.425, WI Stats., or standards adopted by the SCD using national standards, guidelines from learned societies or national organizations or other recognized groups or organizations. (PI 34.15(2)(b)

Revised 9-2003

Table of Contents

Administration

Content Guidelines for
Instructional and Non-Instructional Programs Coordinators

Athletics and Co-Curricular Programs Coordinator
Gifted and Talented Coordinator
School Network Coordinator
Personnel Coordinator
Public Relations Coordinator
Research Coordinator
School to Work Coordinator
Title I Coordinator
Standards and Assessment Coordinator

- Organize adults into learning communities whose goals are aligned with those of the school and district.
- Work as part of a team to guide continuous instructional improvement for all students.
- Use multiple sources of information to guide school and student improvement and demonstrate its impact.
- Use multiple sources of data as diagnostic tools to assess, identify and apply instructional improvement.
- Use learning strategies appropriate to the intended goal.
- Work with the learning community to develop relationships that are mutually empowering, respectful, and responsive.
- Work with educators to understand and appreciate all students, create safe, orderly and supportive learning environments, and hold high expectations for their academic achievement.
- Actively engage the community to create shared responsibility for student and school success.

Draft—8-2003

Content Guidelines for
Children At Risk Coordinator

A Children At Risk Coordinator will demonstrate knowledge of and skills in:

1. Diversity as identified in PI 34.15.
2. Wisconsin Children At-Risk legislation and Administrative codes.
3. Children At-Risk program and budget management.
4. School and student level performance reports.
5. Research related to student risk factors and strategies to overcome risks.
6. Advocacy role and strategies for serving at-risk students in school/community.
7. Contracting and monitoring strategies for at-risk students' performance.
8. School and community support services.
9. Communication with school staff, parents/guardians and community agencies.
10. Empathy for working with at-risk students.
11. Commitment to at-risk students' success in school and community.
12. Persistence in working with at-risk students, community and families.
13. Entrepreneurial approach to services design.

Draft 8/17/01

Content Guidelines for
Dean of Students

MISSING

Content Guidelines for Director of Instruction

A Director of Instruction will demonstrate knowledge of and skills in:

1. Minority group relations as identified in PI 34.15(4)(c).
2. The organization and operation of public schools at all levels.
3. The governance of education at the national, state and local levels.
4. Supervision of instruction.
5. Evaluation of personnel.
6. School finance and taxation.
7. School business administration.
8. School law including those related to pupils, special education and employee contracts.
9. School and community relations.
10. The politics of education.
11. Educational leadership including participatory management, long-range strategic planning and change agent processes.
12. Human growth and development from birth through adult.
13. Oral and written communication.
14. Coordination of co-curricular and extra-curricular programs including organization structure, program planning and evaluation, policy formation, and curriculum development at both the school and district levels.
15. Test and measurements including norm-referenced and teacher constructed testing.
16. Curriculum development at the early childhood—middle childhood, middle childhood—early adolescence, and early adolescence—adolescence levels.
17. The role, function, and responsibility of a director of instruction through a supervised practicum, internship or documented work experience in a school setting.

Content Guidelines for
Director of Special Education and Pupil Services

The Director of Special Education and Pupil Services will demonstrate knowledge of and skills in:

1. Historical, theoretical and legal foundations of special education and pupil services including:
   - Historical and evolving special education laws, regulations, and policies and procedures that effect the lives of children with disabilities and their families.
   - Models, theories and philosophies that provide the basis for general and special educational systems.
   - Organizational and systems theory including political and economic issues that effect policy development within state and local education agencies and across other service systems.
   - Federal, state, and local education reform initiatives and their requirements for both general and special education.
   - Legal responsibility with regard to school-based counseling, psychological, social work, and nursing services including the children's code under Wis. Stats., Chapter 48.

2. The characteristics of learners including:
   - Theories of child and adolescent development and principles of learning and how they relate to children at risk and children with disabilities.
   - Differential learning characteristics of students with and without disabilities and the implications for development of programs and services.

3. Assessment and diagnosis practices including:
   - Current legal and policy issues surrounding assessment and accountability related to children at risk and children with disabilities.
   - Characteristics, appropriate use, and interpretation of various types of education-related assessments, including but not limited to norm-referenced, informal, and performance-based portfolio.

4. Instructional content and practice including:
   - General education curriculum theory, models, and implications for children at risk and children with disabilities.
   - General education curriculum theory, instruction, and how special education and related services support student access to the general education curriculum.

5. Planning and managing the educator and learning environment including:
   - Research methods and knowledge about issues and trends to improve practice in schools and classrooms.
   - Coordination of curriculum and instructional programs and practice strategies that facilitate the seamless movement of students from early childhood into K-12 environments and from school to post-secondary settings.

- Organization, development and management of collaborative and mutually supportive pupil services and special education programs within educational settings.
- Program evaluation models, processes and accountability systems.
- Leadership and human resources management including recruitment, personnel assistance and development, on-going supervision and evaluation of personnel, sites and district services related to learning outcomes for all students.
- Federal, state and local fiscal and taxation policies related to education and other social and health agencies.
- The educator standards under s. PI 34.02.
- Minority group relations under s. PI 34.15(4)(c).

6. Managing student behavior and social skills/interactions including:
   - Federal, state and local policies and procedures governing the discipline of all students and the implications for children at risk and children with disabilities.
   - Knowledge of legal and ethical issues surrounding use of various forms of behavior and social skills management procedures for children at risk and children with disabilities.

7. Communication and collaboration partnerships including:
   - Interacting successfully with students, parents, educators, employers, and community support systems such as juvenile justice, public health, vocational rehabilitation, human services, and early childhood and adult education.
   - Approaches for involving parents, family, and community members in educational planning, implementation, and evaluation.
   - The roles of parents and various advocacy organizations as they support children at risk and children with disabilities and their families.

8. Professional and ethical practices including:
   - The professional ethics and social behaviors appropriate for school and community.
   - Interpersonal communication, intergroup communication, and public communication both oral and written.

Content Guidelines for
Education For Employment Coordinator

(Career and Technical Education Coordinator)

An Education for Employment Coordinator will demonstrate knowledge of and skills in:

1. developing policies, long-rang plans and advocacy for career and technical education based on current research, federal and state requirements and best practices.
2. understanding and promotion of the concept of comprehensive programs in career and technical education which includes teaching the academic disciplines of marketing education, business education, health sciences occupations, agriculture education, technology education, and family and consumer sciences education.
3. understanding and promoting the concept of comprehensive programs in career and technical education which includes co-curricular career and technical student organizations related to each of the disciplines.
4. understanding and promotion of the concept of comprehensive programs in career and technical education which includes planning, coordinating and evaluating work based learning as a strategy for career development.
5. developing and implementing on-going evaluation plans for career and technical education and using the results for program improvement.
6. developing school, business and community relations that support the goals of career and technical education. (create advisory committees, serve on economic development committees, etc.)
7. developing and managing budgets and grants.
8. gathering, analyzing and disseminating data related to career and technical education, including local, state and national labor market information.
9. personnel selection and supervisory practices according to accepted personnel standards.
10. assessing staff development needs and providing quality staff development opportunities in career and technical education. (in-services, workshops/meetings, sharing research and best practices)
11. strategic planning, group facilitation, conflict resolution and mediation, and continuous improvement practices.

12. understanding the Wisconsin Developmental Guidance Model and the Education for Employment Standards, especially the relationship between comprehensive career development and career and technical education.

13. providing leadership in the understanding and promotion of postsecondary options for students especially in technical areas. (articulation, Tech Prep, Youth Options, nontraditional opportunities)

14. the integration of career and technical education model academic standards into K-12 curricula and assessment.

15. understanding the roles and responsibilities of working in a profit-making business environment. (through externships, work experience, volunteer experiences, etc.)

7/02/01

Content Guidelines for
Instructional Library Media Supervisor

An Instructional Library Media Supervisor will demonstrate knowledge of and skills in:

Educational administration/leadership:

The candidate can:

- Articulate the principles of school administration and apply them to the school district's library media program
- Build consensus and motivate different people
- Monitor, assess, and employ existing and emerging technologies for instructional and management applications

School personnel management:

The candidate can:

- Apply a knowledge of human relations to the direction of library media program personnel
- Recruit, hire, train, assign, supervise, evaluate, and provide leadership for school library media specialists and other staff in the school district's library media programs

Supervision of instruction:

The candidate can:

- Apply knowledge of adult learning theory, program planning and evaluation, and curriculum development at the elementary, middle and secondary levels
- Apply appropriate research findings to improve teaching and learning throughout the school district and specifically within the library media program
- Participate in district-wide instructional leadership efforts
- Provide leadership in planning and using existing and emerging instructional and informational technologies in all aspects of the school district's educational program
- Assess needs, and develop and implement a program of inservice education that incorporates information and technology literacy and its integration into the curriculum

District level library media program supervision

The candidate can:

- Apply effective management principles to the administration of the district level library media program
- Work with faculty, administrators, instructional technology staff, and other library media professionals to establish library media program goals that are an integral part of the educational program in the district
- Initiate and direct activities involving faculty, administrators, and other library media professionals to meet the library media program goals
- Design, establish, and communicate district wide policies and procedures to meet the library media program goals
- Articulate and promote the library media program goals, activities, and policies, to appropriate individuals and groups
- Prepare, justify, and administer the district level library media program budget based on instructional program needs
- Develop proposals to secure funding from grant programs and other sources
- Evaluate in collaboration with faculty, administrators, instructional technology staff, and other library media professionals the instructional effects of the library media program.
- Advocate, initiate, and implement formal and informal agreements providing for increased availability and accessibility of information through interlibrary cooperation and resource sharing.
- Conduct research to assist in the development and operation of exemplary district level library media programs throughout the school district
- Facilitate the efforts of the district level library media advisory committee that includes administrators, teachers, library media staff, instructional technology staff, students, parents, and other representatives of the community
- Understand the principles and support the practice of free inquiry and access to information
- Model and promote ethical use of information and technology and respect and comply with intellectual property rights, laws, and guidelines
- Demonstrate awareness of laws and regulations that affect school library media programs
- Design school library media centers and other instructional facilities that support the instructional program and facilitate learning
- Support and develop a library media program that provides for equitable and flexible access to information, ideas, resources, and services both within and beyond the district

March 17, 2000

Content Guidelines for
Instructional Technology Coordinator

The Instructional Technology Coordinator will demonstrate knowledge of and skill in:

14. Knowledge of the principles and theories of PK-12 curriculum development and teaching strategies.

15. Ability to provide educational leadership, including visioning, strategic planning, goal-setting, curricular innovation, program evaluation, problem solving, and utilizing management theory and practice.

16. Interpersonal and communication skills needed to work and interact effectively within the educational community (students, educators, parents, staff and the general public) by displaying a comprehensive competence that promotes reliability, balance, responsiveness and flexibility.

17. Knowledge and ability to plan, manage, budget, make decisions and implement:
    - technology support for instruction
    - the selection, supervision, training and evaluation of staff
    - instructional technology systems
    - facility design
    - funding sources, including grants
    - instructional design

18. Ability to plan and manage the identification, evaluation, selection, acquisition, maintenance and use of instructional technology systems (voice, video, data, etc.)

19. Ability to support and implement inclusive and comprehensive user access within and beyond the school.

20. Ability to facilitate the integration of instructional technology into the curriculum through teaching and learning activities.

21. Ability to evaluate and implement appropriate, current and emerging trends and developments in instructional technologies, including information access and delivery systems, networking and telecommunications.

22. Ability to oversee a reliable technology infrastructure and make appropriate decisions regarding that infrastructure in support of learning and teaching.

23. Ability to develop, review, implement and evaluate policies and procedures governing instructional technology.

24. Participate in local, regional, state, and national collaborative opportunities .

25. Access resources through partnerships, organizations, consortia and educational institutions.

26. Ability to facilitate and promote effective use of technology through the planning and implementation of appropriate staff development models.

27. Ability to facilitate and promote the use of technology to meet identified academic standards.

28. Awareness of and ability to apply federal, state and local regulations, laws and policies involving instructional technology and information access.

29. Knowledge of societal and ethical issues related to technology, including the impact of technology on society, censorship, equity, access issues, rights to privacy, copyright laws, and fair use guidelines.

30. Awareness and use of resources for personal professional growth, including electronic and printed literature, professional organizations, and collegial avenues.

8/14/01

Content Guidelines for
Local Vocational Education Coordinator

(Career & Technical Education Coordinator)

A Local Vocational Education Coordinator will demonstrate knowledge of and skills in:

1. developing policies, long-rang plans and advocacy for career and technical education based on current research, federal and state requirements and best practices.
2. understanding and promotion of the concept of comprehensive programs in career and technical education which includes teaching the academic disciplines of marketing education, business education, health sciences occupations, agriculture education, technology education, and family and consumer sciences education.
3. understanding and promoting the concept of comprehensive programs in career and technical education which includes co-curricular career and technical student organizations related to each of the disciplines.
4. understanding and promotion of the concept of comprehensive programs in career and technical education which includes planning, coordinating and evaluating work based learning as a strategy for career development.
5. developing and implementing on-going evaluation plans for career and technical education and using the results for program improvement.
6. developing school, business and community relations that support the goals of career and technical education. (create advisory committees, serve on economic development committees, etc.)
7. developing and managing budgets and grants.
8. gathering, analyzing and disseminating data related to career and technical education, including local, state and national labor market information.
9. personnel selection and supervisory practices according to accepted personnel standards.
10. assessing staff development needs and providing quality staff development opportunities in career and technical education. (in-services, workshops/meetings, sharing research and best practices)
11. strategic planning, group facilitation, conflict resolution and mediation, and continuous improvement practices.

12. understanding the Wisconsin Developmental Guidance Model and the Education for Employment Standards, especially the relationship between comprehensive career development and career and technical education.

13. providing leadership in the understanding and promotion of postsecondary options for students especially in technical areas. (articulation, Tech Prep, Youth Options, nontraditional opportunities)

14. the integration of career and technical education model academic standards into K-12 curricula and assessment.

15. understanding the roles and responsibilities of working in a profit-making business environment. (through externships, work experience, volunteer experiences, etc.)

7/02/01

Content Guidelines for Principals

A Principal will meet all of the standards in PI 34.03 (10 –(7) and demonstrate knowledge of and skill in:

31. Diversity as identified in PI **3**4.15(4)(c).
32. The organization, history, and operation of public schools.
33. The governance of education at the national, state and local levels.
34. Supervision of instruction.
35. Evaluation of personnel.
36. School finance and taxation.
37. School business administration.
38. School law including those related to pupils, special education and employee contracts.
39. School and community relations.
40. The politics of education.
41. Educational leadership at the building level including participatory management, long-range and continuous strategic planning and change agent processes.
42. Oral and written communication.
43. Operational tasks and instructional leadership of the principalship.
44. Coordination of co-curricular and extra-curricular school programs, including organizational structure, program planning, policy formation and curriculum development.
45. Curriculum development at the school level.
46. Tests and measurements including norm-referenced and teacher constructed testing.
47. The role, function and responsibility of the principal through a supervised practicum, internship or documented work experience in a school setting at the appropriate level.

Content Guidelines for Reading Specialist

The Reading Specialist will demonstrate knowledge of and skill in:

1. Language Arts Standards including:
   - Wisconsin Model Academic Standards for English Language Arts.
   - National Standards for the English Language Arts

2. Language Arts Processes including:
   - Language arts processes (reading, writing, speaking, listening, viewing, and representing) interrelationships among them.
   - Interdisciplinary and integrative aspects of language arts processes.
   - Perception of reading as a process of constructing meaning through the interaction of the reader, text, and context of the reading situation.

3. Language Arts Models including:
   - Strengths and weaknesses of various literacy models.

4. Research including:
   - Contributions of literacy scholars to the literacy knowledge base.
   - Research in reading and the language arts, special education, psychology, and other fields that address pupils with reading and learning disabilities.
   - Historical and current perspectives, terminology, diagnostic procedures, and instructional approaches in reading and the language arts, psychology, and special education.
   - Research methodologies, e.g., ethnographic, descriptive, experimental, and historical.

5. Language including:
   - The nature and structure of language.
   - Language variation.
   - Relationship of language systems (phonemic, morphemic, semantic, syntactic, and pragmatic) to the language arts.

6. Literacy, Language Acquisition, Language Development, Cognition and Learning including:
   - Major theories of literacy, language acquisition, language development, cognition, metacognition, and learning.
   - Developmental process of the language arts (reading, writing, speaking, listening, viewing, and representing) from infancy through middle childhood.
   - Nature and multiple causes of reading disabilities.
   - Major definitions of family literacy and the impact of family structures, functions, relationships, and dynamics on literacy development and educational progress.

- Cultural, linguistic, cognitive, and social aspects of literacy development and the interrelationships among these aspects and the language arts.
- Influence of physical, psychological, social, cultural, environmental, and cognitive factors on learning, language development, and reading.
- Influence of environmental context on use of language.

7. Literature including:
    - Classic and contemporary literature, fiction and non-fiction, including oral, written and visual forms, at appropriate levels.
    - Function and variety of literary forms.

8. Sociocultural and Political Aspects of Literacy including:
    - Literacy as a means for shaping and transmitting culture.
    - Relationship between political processes and reading policy.

Content Guidelines for School Business Administrator

The School Business Administrator will meet all of the standards in PI 34.03 (1)—(7) and demonstrate knowledge of and skill in:

1. Diversity as identified in PI 34.15(4)(c).
2. The organization, history, and operation of the public schools.
3. The governance of education at the national, state and local levels.
4. Evaluation of personnel.
5. School finance and taxation.
6. School business administration.
7. School law including those related to pupils, special education and employee contracts.
8. School and community relations.
9. The politics of education.
10. Educational leadership including participatory management, long-range
11. strategic planning and change agent processes.
12. Oral and written communication.
13. Accounting.
14. Data management and processing.
15. Risk management.
16. School facilities
17. Collective bargaining, contract administration or support services.
18. The role, function, and responsibility of a school business administrator through a supervised practicum or internship in a school setting.

7-2001

Content Guidelines for
School District Administrator or Superintendent

A School District Administrator or Superintendent will meet all of the standards in PI 34.03 (1)—(7) and demonstrate knowledge of and skill in:

1. Diversity as identified in PI 34.15(4)(c).
2. The organization, history, and operation of public schools, including program planning and evaluation, theory, research, and practice at both the school and district level.
3. The governance of education at the national, state and local levels.
4. Supervision of instruction.
5. Personnel administration.
6. The economics of education including school finance and taxation.
7. School business administration
8. School law including Chapter 115 to 121, especially those related to pupils, special education, employee contracts, and collective bargaining.
9. District, school and community relations.
10. The politics of education, at both the basic and advanced level, including local, state, and national politics of educational decision-making, and the role of pressure groups in shaping educational policy at these levels.
11. Educational leadership at the district level including participatory management, long-range strategic planning and change agent processes.
12. Oral and written communication.
13. The role and responsibility of the superintendency including the official functions of the school board.
14. The operational tasks and instructional leadership of the principalship.
15. Coordinating special school programs, including organizational structure, program planning, policy formation and curriculum development.
16. Curriculum development at the district level.
17. Different levels of school administration through documented work experience in a school setting.
18. Facilities Management
19. The role, function, and responsibility of the superintendent through a supervised practicum or internship in a school district setting.

7-2001

Content Guidelines for School to Work Coordinator

(Career and Technical Education Coordinator)

A School to Work Coordinator will demonstrate knowledge of and skills in:

1. developing policies, long-rang plans and advocacy for career and technical education based on current research, federal and state requirements and best practices.
2. understanding and promotion of the concept of comprehensive programs in career and technical education which includes teaching the academic disciplines of marketing education, business education, health sciences occupations, agriculture education, technology education, and family and consumer sciences education.
3. understanding and promoting the concept of comprehensive programs in career and technical education which includes co-curricular career and technical student organizations related to each of the disciplines.
4. understanding and promotion of the concept of comprehensive programs in career and technical education which includes planning, coordinating and evaluating work based learning as a strategy for career development.
5. developing and implementing on-going evaluation plans for career and technical education and using the results for program improvement.
6. developing school, business and community relations that support the goals of career and technical education. (create advisory committees, serve on economic development committees, etc.)
7. developing and managing budgets and grants.
8. gathering, analyzing and disseminating data related to career and technical education, including local, state and national labor market information.
9. personnel selection and supervisory practices according to accepted personnel standards.
10. assessing staff development needs and providing quality staff development opportunities in career and technical education. (in-services, workshops/meetings, sharing research and best practices)
11. strategic planning, group facilitation, conflict resolution and mediation, and continuous improvement practices.
12. understanding the *Wisconsin Developmental Guidance Model and the Education for Employment Standards*, especially the relationship between comprehensive career development and career and technical education.

13. providing leadership in the understanding and promotion of postsecondary options for students especially in technical areas. (articulation, Tech Prep, Youth Options, nontraditional opportunities)

14. the integration of career and technical education model academic standards into K-12 curricula and assessment.

15. understanding the roles and responsibilities of working in a profit-making business environment. (through externships, work experience, volunteer experiences, etc.)

7/02/01

Pupil Services

Content Guidelines for School Counselor

A School Counselor will demonstrate knowledge of and skill in:

1. Demonstrate an understanding of the psychological and sociological foundations of human development, learning, and behavior.
2. Demonstrate an understanding of skills required to develop, organize, administer, evaluate, and promote a comprehensive developmental school-counseling program based on the *Wisconsin Developmental Guidance Model* in collaboration with educators, families and community resources.
3. Demonstrate the skills required to work effectively with school teams to promote a safe and healthy school climate, including prevention and intervention strategies such as conflict resolution, peer mediation and crisis management.
4. Demonstrate an understanding of the role that diversity, inclusion, gender and equity have on students' academic achievement, personal/social and career development.
5. Demonstrate individual and group counseling skills, which facilitate students', personal/social, academic, and career development throughout their Pk-12 school experience.
6. Demonstrate an understanding of "Pk-16" career development theories, practices and programs, including the ability to facilitate student skill development.
7. Demonstrate knowledge of developmental approaches to assist all students and parents at points of educational transition such as, home to elementary school, elementary to middle to high school and high school to postsecondary options.
8. Demonstrate an understanding of relevant state and federal laws, institutional rules, regulations and standards along with the national and ethical standards of the American School Counselor Association.
9. Demonstrate the ability to utilize research, student data and institutional assessments to improve school counseling programs and recommend systematic changes that will improve the learning environment for all students.
10. Demonstrate an understanding of current and emerging technology in education and school counseling to assist students, families, and educators in making informed academic, career, and personal/social choices.
11. Demonstrate an understanding of and how to acquire ongoing professional development and reflection in helping to continually evaluate school-counseling services.
12. Demonstrate acquired skills in understanding the role, function and responsibilities of a school counselor by acquiring a minimum of 600 hours of supervised practicum in a school setting at the appropriate level(s).

Draft 2000

Content Guidelines For School Nurse

The School Nurse will demonstrate knowledge of and skill in:

1. The organizational processes of public education, including the organizational culture, values, structure, and politics of schools.
2. Describing the roles and areas of competence of various professionals within the local educational agency, including the teacher standards under PI 34.
3. Defining the purpose, role, professional standards and laws affecting school nurse practice in the public schools.
4. Participating In the development of a school nursing practice within an education system that is consistent with principles of a family-centered approach, community health practice theory, comprehensive school health, and child growth and development.
5. Following the American Nurses Association Standards of Clinical Nursing Practice and the National Association of School Nurses Standards of Professional School Nursing Practice in the application of the nursing process to systematically collect relevant data and other information; identify problem areas and needs; make or facilitate empirically based decisions about service delivery; and evaluate the outcome of service delivery within an educational setting.
6. Making assessments, planning strategies of care, implement, and evaluate care in ways that promote the academic success of a child with a chronic condition, illness or disability .
7. Utilizing research to develop health policies and procedures to improve health services, programs, and client outcomes, and recommend systematic change that will support pupil learning, health, safety, and development.
8. Developing and implementing health policies and procedures in collaboration with school administrators, the school medical advisor, public health officials and the Department of Public Instruction.
9. Collaborating with the student, family. school staff, community, and other providers in the formulation of overall goals, objectives, timelines, care plans, and decisions related to the delivery of services.
10. The relevant federal and state laws, administrative codes and institutional rules and regulations, including practice which is guided by the Wisconsin Standards of Practice for Registered Nurses and Rules of Conduct, and the American Nurses Association Code of Ethics with interpretive Statements for School Nurses.
11. Articulating the organization, content, roles, and management of collaborative pupil services programs in an educational setting, and being able to define the pupil

services model as a comprehensive, multifaceted, and integrated approach for addressing barriers to learning and promoting healthy development.

12. The cultural factors in race, gender, ethnicity, sexual orientation and socioeconomic status and how culture affects individual, family, group, organization and community behavior, academic achievement, and health status.

13. How the larger environment influences the child's health and development and the family's activities in relation to the child's health to make assessments, plan strategies, and implement and evaluate approaches to care of the child that are in accord with the family's economic and social situation and available resources.

14. Using effective written, verbal, and nonverbal communication skills to work effectively with individuals and groups with different abilities, disabilities, orientations, strengths and weaknesses.

Content Guidelines for School Psychologist

The School Psychologist will demonstrate knowledge of and skill in:

1. Data based decision making and accountability including:
   - Systematic decision-making processes to identify problem areas and needs.
   - Collecting relevant data and other information.
   - Making or facilitating empirically based decisions about service delivery.
   - Evaluating the outcomes of service delivery.
   - Using a variety of models and methods of assessments that yield information useful to understanding the problem; that identify strengths and needs; and measures progress and accomplishments.

2. Interpersonal communication, collaboration and consultation including:
   - The communication of opinions and data to all appropriate parties in a supportive, problem-solving fashion.
   - Utilizing empirically supported, collaborative consultation methodologies to improve the learning environment at the individual, groups and system levels.

3. Effective instruction and development of cognitive/academic skills including:
   - Collaboration with others to develop appropriate cognitive and academic goals for students.
   - Designing, implementing and evaluating direct and indirect services including consultation, behavior analysis/intervention and other interventions focusing on instruction to achieve these goals.

4. Socialization and development of life competencies including:
   - Collaborating with others to develop appropriate behavioral, affective, adaptive, or social goals for students.
   - Designing, implementing and evaluating direct and indirect service including consultation, behavior analysis/intervention and other interventions to achieve these goals.

5. Student diversity in development and learning including, the sensitivity, knowledge, and skills needed to work with individuals and groups with different abilities, disabilities, orientations, strengths, and needs from a variety of racial, cultural, ethnic, experiential, socioeconomic, gender-related and linguistic backgrounds.

6. The school and system structure, organization and climate including:
   - Understanding the school and other settings as systems.
   - Using decision-making methods with individuals and groups to facilitate structure and policies that create and maintain safe, caring, and inviting learning environments for children and other members of the community.

7. Prevention, crisis intervention and mental health services including:
   - An understanding of both typical human development and psychopathology.
   - Providing or contributing to prevention and intervention programs that promote the psychological and physical well being of students.

8. Home/school/community collaboration including working effectively in partnership with a variety of family systems, educators, and the community, acknowledging family strengths and influences that affect student's well being, learning and achievement.

9. Research and program evaluation including:
   - Maintaining a professional knowledge base of research and other relevant information.
   - Translating research into practice.
   - Understanding research design and statistics in sufficient depth to conduct investigations and program evaluation for improvement of services.

10. School psychology practice and professional development through maintaining a knowledge base of the history and foundations of their profession and practice in ways which meet all appropriate ethical professional, and legal standards to enhance the quality of services and to protect the rights of all parties.

11. Information and technology including accessing, evaluating and utilizing various information sources and technology relevant to their work in ways that safeguard or enhance the quality of services.

Draft 9/5/00

Content Guidelines For
School Social Worker

The School Social Worker will demonstrate knowledge of and skill in:

1. Implementing the mission of school social work to insure student learning, educational equity and social justice for every student by reducing or eliminating the social, economic, and environmental barriers that may interfere with a student's ability to maximally benefit from his/her education.

2. The influence of bio-psycho-social variables on human development and behavior and the application of theoretical frameworks to understand the interaction among individuals and between individuals and social systems (families, groups, organizations, and communities).

3. The ability to assess children's adjustment to and performance in school including:
   - The child's physical, cognitive, social and emotional development and family history.
   - The child's behavior and attitudes in different settings, including formal assessment of adaptive and behavioral functioning.
   - Patterns of interpersonal relationships as observed in the family, school, and community.
   - Formal and informal policies of the school and other institutional factors that may affect the child's behavior and learning.
   - Patterns of achievement and adjustment at critical points in the child's growth and development.
   - The existence, accessibility, and utilization of community resources for children and families.

4. Systematic assessment of the interactions of individuals, families, schools, and community, and how to select and implement appropriate and effective services including:

   - The ability to provide a range of social work services including counseling, crisis intervention, casework, group work, community organization, consultation, case management, family engagement, mediation and conflict resolution, advocacy, curriculum and program development, education and training.
   - Applying effective prevention and intervention methods with individuals, families, schools, and communities.
   - Using communication and interpersonal skills differentially with a variety of client populations, colleagues, and members of the community.

5. Utilizing a strength-based approach to enhance students' capacities, with special emphasis on students who live in poverty, belong to oppressed groups, and/or whose families are in crisis.

6. Cultural factors in race, gender, ethnicity, sexual orientation and social class and how culture affects individual, family, group, organizational and community behavior; and the ability to develop trust, open communication, mutual respect and on-going collaboration with members of diverse populations.

7. Issues of prejudice, discrimination, and oppression; the ability to apply strategies and skills to the advancement of social change and economic justice; and effective advocacy for members of oppressed groups, developing programming and/or interventions to meet the unique needs of diverse populations.

8. Practice literature relevant to the areas of children, youth, family, and schools; and the use of the literature for services for children and youth, including special populations, families and schools.

9. Critically evaluating the impact of school social work practice and educational interventions including:

10. The concept of accountability in practice and research, including program evaluation.

11. Scientific investigation and the requirements of research design.

12. Performance objectives and measurable outcomes and means to assess the effects of prevention and intervention strategies.

13. The mission of public education, including the purposes, roles, professional standards, NASW code of ethics, and laws affecting social work practice in the public schools; and the ability to practice as an autonomous social worker in keeping with the values and ethics of the profession.

14. The values, culture and structures of the school including:

    - Organizational theory including systems theory.
    - The historical development of social work in education.
    - The politics of school-community relations in shaping educational policy and the effects of the different types of school-community power structures.
    - Legislation affecting educational opportunity.
    - Child and adult subgroups in the local educational agency.
    - Roles and areas of competence of various professionals in the local educational agency, including the teacher standards under PI 34.02.
    - Current and alternative organizational structures, functions and leadership in the school and community.
    - Early childhood through adolescence general, alternative and special education curricula, programs and procedures.

15. School and community support systems that provide assistance to and interact with students, families and schools.

16. Working collaboratively as leaders or members of interdisciplinary teams and community partnerships to mobilize resources of the local educational agency and community to meet the needs of children and families.

17. The process of policy formation, implementation and analysis and the impact on client systems, workers, agencies/organizations and communities.

Special Education

Content Guidelines For
Cognitive Disabilities

The Cognitive Disabilities (CD) teacher will demonstrate knowledge of and skill in:

1. The definition, classification, etiology, prevalence, characteristics, culture and social factors, and medical implications of students with CD who may or may not have concomitant physical, behavioral, or sensory disabilities.

2. Significant historical trends, current issues, and the effect of state and federal laws, regulations and litigation on students with CD.

3. The impact of CD on families and how to assist families in accessing sources of unique services, networks, and organizations for individuals with CD.

4. The methods to determine instructional priorities and assist students with CD to develop and attain life goals utilizing the school and community resources.

5. Assessment, diagnosis and evaluation of students with CD including:
   - Student evaluation that includes observations, background information, learning styles, interviews, case studies and anecdotal records.
   - Informal and formal measurements of adaptive skills including: selection, administration, interpretation, reporting, and application of assessment data.
   - Legal provisions, regulations, and guidelines regarding unbiased assessment and use of instructional assessment measures with students with CD.
   - Adapting and modifying existing assessment tools/methods to accommodate the unique abilities and needs of students including ecological inventories, portfolio assessments, functional assessments and future-based assessments.
   - Decisions about the participation of students with CD in state, district, and other general education assessments and modification of assessment tools or development of an alternate assessment process to meet the specific needs of the student.

6. Practices in developing, monitoring, and revising appropriate individualized educational programs for students with CD.

7. The principles of learning and effective instructional strategies to meet the needs of students with CD.

8. The methods for arranging learning environments to maximize the acquisition of objectives, use of materials, and specially designed and adapted equipment.

9. A variety of curriculum models used in multiple settings with students with CD.

10. Curricula and methods including:

    - Motor development including sensory motor integration.

- Use of appropriate physical management techniques, including positioning, handling, lifting, relaxation, and range of motion.
- Communication including alternative and augmentative methods of communication and assistive technology.
- Social development including human sexuality, self-advocacy, family and personal relationships.
- Academic development including functional skills.
- Daily living skills including self-care, health, safety, home maintenance, transportation. recreation, and leisure activities.
- Transition skills including career awareness, work-related skills and attitudes, job exploration, job-training skills, work experience and community based instruction.

11. Strategies for facilitating the application and generalization of skills.

12. Managing student behavior including:

    - Various classroom management techniques and effective teaching practices that assist students with CD to develop and maintain appropriate social behavior, social interaction and conflict resolution skills.
    - Strategies for crisis prevention and intervention that use the least intensive intervention consistent with the needs of the student.
    - Functional behavioral assessment and intervention planning using behavior analysis principles.
    - Behavioral principles including positive reinforcement, negative reinforcement, and ignoring, and how the application of these principles affects student behavior and motivation.
    - Applicable laws, rules, regulations, and procedural safeguards regarding the planning and implementation of behavior management strategies with students with disabilities.
13. Strategies for monitoring instructional effectiveness.

14. The use of strategies which facilitate collaborative relationships among general and special education teachers, paraprofessionals, related services staff, support staff, administrators, parents, and others to jointly plan, implement, and evaluate educational services.

15. Effective training and appropriate utilization of special education paraprofessionals who assist students with CD.

16. Working with health care professionals and other support staff to plan, develop, implement, and evaluate a health care plan that may include seizure management, tube feeding, catheterization, use of oxygen and CPR.

17. The methods and models for adapting the regular curriculum, grading, and classroom climate to facilitate the participation of students with CD in the general education classroom.

18. A commitment to professionalism and ethical practices including:

    - Awareness and sensitivity to culture, religion, gender, and sexual orientation among students, family and colleagues.
    - Maintenance of a sense of professional efficacy by developing high expectations for the quality of life span potential of individuals with disabilities.
    - Accountability for meeting student's unique needs and maintaining a high level of competence and integrity in the practice of their profession.
    - Professional conduct that protects the confidentiality of students and their families.

Draft 9/5/00

Content Guidelines For
Cross Categorical Special Education

The Cross Categorical teacher will complete an approved program in Cross Categorical special education with an area of emphasis in one of the following: specific learning disability (SLD), emotional behavioral disability (EBD), cognitive disability (CD) and will demonstrate knowledge of and skill in:

1. Philosophical, historical and legal foundations of special education including:
    - The historical perspectives, legislative and litigative history, models, theories, and philosophies that provide the basis for special education practice.
    - The current legislation, regulations, policies, litigation, and ethical issues related to the provision of educational services (e.g., due process, continuum of services, assessment, discipline, inclusive education, supplemental services and supports, specialized health care needs, assistive technology) for students with disabilities.
    - Current educational terminology and definitions relevant to students who would benefit from an independent curriculum.
    - The variations in beliefs, traditions and values across cultures and within society and how these affect the relationship among and between the child, family and schooling.
    - The issues and trends related to all subfields of special education including early childhood special education (e.g., family-centered, community-based settings and services, interagency collaboration) and the provision of adult services.
    - The issues related to definitions and identification procedures for students with disabilities including those from culturally and or linguistically diverse backgrounds.
    - The rights and responsibilities of parents, students, teachers, and other professionals as related to student learning needs and educational programs.

2. The characteristics of learners including:
    - The emotional/behavioral, physical, sensory, cognitive, communication, learning, and social development of all students with disabilities.
    - The various etiologies of medical, psychiatric, neurological and language disorders and how these impact the emotional/behavioral, physical, sensory, cognitive, communication, learning, and social functioning of students with disabilities.
    - The similarities and differences between the emotional/behavioral, physical, sensory, communication, learning, and social functioning and lifelong planning needs between students with disabilities and their peers without disabilities and between and among the various impairments of students with disabilities.
    - The similarities and differences among all categories of disability, the levels of severity and implications for instruction.

- The effects various impairments have on emotional/behavioral, physical, sensory, cognitive, communication, learning, and social functioning of students with disabilities.
- The effects of various medications on emotional/behavioral, physical, sensory, cognitive, communication, physical, learning, and social functioning of students with disabilities.

3. Assessment, diagnosis and evaluation including:
   - The legal provisions, regulations and guidelines regarding the use of tests and other evaluation materials.
   - The policies and regulations regarding referral, evaluation and placement procedures for students with disabilities.
   - The terminology used in the administration of tests and other evaluation materials.
   - The appropriate application and interpretation of standardized tests (e.g., age/grade scores, standard scores, percentile ranks, stanines).
   - The appropriate application and interpretation of informal tests and other evaluation materials (e.g., teacher-made tests, curriculum based, surveys, inventories, observation, interviews).
   - A variety of procedures for identifying students' learning characteristics and needs, monitoring student progress, and evaluating learning strategies and instructional approaches.
   - The accurate development and maintenance of student evaluation records (e.g., summary of findings).

4. Instructional content and practice including:
   - Learning theory and effective research-based instructional strategy application.
   - Curriculum materials and systematic instructional methods for teaching basic academic skills and learning strategies in reading, mathematics, and written language; and assignment completion and test taking skills needed to succeed academically.
   - Curriculum materials and systematic instructional methods for assisting students in developing appropriate communication, affective and social skills including self awareness, self advocacy, self-determination skills and career, vocational and life skills needed for post school independence.
   - The selection and development of remedial, adaptive, and compensatory content, materials, resources, and strategies appropriate to the student's needs in various learning environments.
   - The selection and use of specialized materials, equipment and technology including assistive technology.
   - Generalization and maintenance of skills across learning environments.
   - Cultural perspectives related to effective instruction for students with disabilities.
   - Evaluation of the effectiveness of instruction and making responsive adjustments of strategies based on continual observations.
   - The development and implementation of transition planning.

- The development and revision of appropriate individualized education programs.

5. Planning and managing the teacher and learning environment including:
   - Research-based information on basic classroom management theories, methods and strategies.
   - Ways that technology, including assistive technology can assist with planning and managing the teaching and learning environment.
   - Characteristics of environments (e.g., materials, equipment, spatial arrangements) that facilitate development, learning, and interaction between and among students.
   - Evaluation, planning and management of procedures that match the learner needs with the instructional environment
   - Common environmental and personal barriers that hinder accessibility and acceptance of students with disabilities
   - Designing, structuring and managing daily routines including transition time for students, staff and the instructional setting.
   - Preparing and implementing appropriate lesson plans.
   - The principles of physical and health management
   - Instructional programs that enhance a student's social participation in family, school, and community activities.

6. Managing Student Behavior and Social Skills/Interactions including:
   - Theories of behavior as they relate to students with disabilities
   - Planning, implementing and evaluating group and individual behavior management strategies, that include:
     - ♦ Rules, regulations, procedural safeguards including ethics, least intensive intervention, and cultural issues.
     - ♦ Problem solving and conflict resolution.
     - ♦ Data collection.
     - ♦ Classroom routines and rules, and environmental modifications.
     - ♦ Generalization and maintenance of skills.
     - ♦ Integrating behavior management into the curriculum.
     - ♦ Crisis prevention/intervention.
     - ♦ Defining target behaviors.
     - ♦ Teaching replacement behaviors.
     - ♦ Identifying appropriate consequences on a continuum.

   - Social skills/interactions, that include:
     - ♦ Generalization and maintenance to other settings.
     - ♦ Areas of education, daily living and transition (e.g., work place, post secondary).
     - ♦ Integration into the curriculum.
     - ♦ Self-awareness, self-control, and self-monitoring.
     - ♦ Alternatives for nonverbal students.

7. Communication and collaborative partnerships including:
    - Effective communication and collaborative relationships with parents, students, and school and community personnel in a culturally responsive environment.
    - Effective communication (oral and written) and collaboration with general education teachers, administrators, parents, and other school personnel when jointly planning, implementing and evaluating education services.
    - The roles of students with disabilities, parents, teachers, and other school and community personnel, who jointly plan, implement and evaluate education services.
    - Family systems and the role of families in supporting child development and educational progress.
    - The typical concerns of parents of students with disabilities and appropriate strategies to help parents deal with these concerns.
    - The sources of unique services, networks and organizations that assist families and students.
    - The types of information generally available from family, school officials, legal system, and community service agencies.
    - The roles and responsibilities of school-based health and other related services personnel, professional groups and community organizations in identifying, assessing and providing services.
    - The characteristics and effects of the cultural and environmental background of the student and family including socioeconomic level, availability of health care, community supports, abuse/neglect, and substance abuse.

8. Professional and ethical practices including:
    - Personal and cultural biases and differences that affect one's teaching and interactions with others.
    - The importance of the teacher serving as a role model and advocate for students.
    - The Council for Exceptional Children (CEC) and other professional standards and codes of ethics.
    - Consumer and professional organizations, publications, and journals relevant to individuals with disabilities.
    - The rights to privacy, confidentiality, and respect for differences among all persons interacting with students with disabilities.
    - Engagement in professional activities that may benefit students with disabilities, their families and or colleagues.
    - Positive regard for the culture, religion, gender, and sexual orientation of individual students and their families.

8-29-2002

Content Guidelines For
Deaf or Hard of Hearing

The Deaf or Hard of Hearing Teacher will demonstrate knowledge of and skill in:

1. The philosophical, historical and legal foundations of deaf or hard of hearing education including:
   - Definitions, identification criteria, and current incidence and prevalence rates of students with hearing loss.
   - Educational models, theories and philosophies (e.g., bilingual-bicultural, total communication, oral/aural) that provide the basis for educational practices(s) and the continuum of placement options for students who are deaf or hard of hearing.
   - The impact of various educational placement options on individual students with regard to meeting educational needs; linguistic, academic, cultural identity, and social-emotional development.
   - Perspectives of the Deaf community on cultural and communication needs of students who are deaf or hard of hearing as they relate to the rights and responsibilities of parents, teachers, and schools.

2. The characteristics of learners including:
   - Research in cognition recognizing that being deaf or hard of hearing alone does not necessarily preclude normal academic development, cognitive development, or communication ability.
   - Various etiologies of hearing loss and the effects that onset of hearing loss, age of identification, and provision of services impact on learning differences in students who are deaf or hard of hearing.
   - Communication features (visual, spatial, tactile, and/or auditory), the differences in quality and quantity of incidental language, and the impact of early comprehensible communication that is necessary to enhance language, cognitive, emotional, and social development of the student who is deaf or hard of hearing.
   - Cultural dimensions that being deaf or hard of hearing may add to the life of a child.
   - The effects of families and/or caregivers on the overall development of the child who is deaf or hard of hearing including an understanding of the variations in beliefs, tradition, and values across cultures and with society and their effect on family relationships.

3. Assessment, diagnosis and evaluation including:
   - The components of an adequate, comprehensive evaluation needed for identification, program planning and placement decisions for students who are deaf or hard of hearing.

- Experience in administering standardized assessment in a variety of language modes matching the language/ communication of the student and the ability to analyze the results.
- Identifying the pros and cons of using standardized measures as well as specialized assessment tools for student who is deaf or hard of hearing.
- The ability to integrate information gathered from curriculum based assessments (formal and informal) with standardized measures in order to report comprehensive information on a student's educational performance.
- Special policies regarding referral, program planning and placement procedures for students who are deaf or hard of hearing (e.g., Federal Policy Guidance, October 30, 1993, COED report, Special Considerations sections of the IEP).
- The ability to assess student language along the continuum including knowledge of linguistic features of American Sign Language and other communication systems.

4. Instructional content and practice including:
   - Minimal proficiency and understanding of the linguistic aspects of American Sign language (ASL) and other communication modes (linguistic and nonlinguistic) used by students who are deaf or hard of hearing.
   - Theories of language, cognition, and reading development in children who are deaf or hard of hearing as compared to their non disabled peers.
   - Standards and benchmarks in the general curriculum including methods of instruction used in general education across content areas, and modifications and accommodations that are appropriate for students who are deaf or hard of hearing.
   - The ability to read and interpret an audiogram, assess maintenance needs of hearing aids and assistive listening devices and evaluate the appropriate use of equipment to maximize the use of residual hearing for individual students.
   - Utilizing techniques to enhance speech production in students who are deaf or hard of hearing based on the ability of the student.
   - Research supported instructional strategies (e.g., English as a second language, bilingual-bicultural), practice (total communication, oral/aural), materials, and technology for teaching students who are deaf or hard of hearing.
   - Fostering independent communication between students who are deaf or hard of hearing with their peers and other school personal.
   - Planning and implementing instruction for students who are deaf or hard of hearing with additional disabilities and special needs.
   - Preparing students who are deaf or hard of hearing in the appropriate use of educational interpreters.

5. Planning and managing the teaching and learning environment and supporting social Interaction skills including:
   - Factors that maximize the classroom environment (such as physical arrangement, seating, proximity of the interpreter to the visual information

presented, teaching style, auditory distraction, etc.) that supports visually oriented and/or auditory learning in students who are deaf or hard of hearing.
- Establishing clear and reasonable communication techniques and expectations for general education teachers when working with students who are deaf or hard of hearing that address respectful interaction including pausing, directing and redirecting attention as used by role models who are deaf or hard of hearing.
- Processes for establishing ongoing interaction of students who are deaf or hard of hearing with peers and role models who are deaf or hard of hearing at the local, state, or national levels.
- Available technology for people who are deaf or hard of hearing such as TTY's, visual alarm clocks, visual alarm, amplified handsets, Assistive Listening Devices, computer programs, etc.

6. Communication and collaborative partnerships including:
   - Providing families with unbiased information on resources available regarding educational options and communication modes or philosophies, as well as social opportunities for their children with other children who are deaf or hard of hearing.
   - Career/vocational programs and transitional supports that are effective for students who are deaf or hard of hearing.
   - Techniques for teaching communication skills and/or sign language to families of children who are deaf or hard of hearing, peers, and other school personnel.
   - The effects of communication on the development of family relationships and strategies used to facilitate communication in families with children who are deaf or hard of hearing.
   - Services provided by governmental agencies (e.g. DVR, Bureau for Deaf and Hard of Hearing, etc.) and nongovernmental agencies (e.g. Lion's Clubs, Telephone Relay Service, Assistive Technology Centers, Service Centers, etc.) in meeting the needs of students who are deaf or hard of hearing.
   - Working in partnership with the many representatives of the educational team including parents, educational interpreters, general education teachers, and speech and language pathologists, educational audiologists, etc., to address the individual needs of the student who is deaf or hard of hearing.
   - Designing in-service for educational staff and parents to address the educational, technology, communication, and social needs of students who are deaf or hard of hearing.

7. Professionalism and ethical practices including:
   - Using self-assessment and self-reflection to develop a portfolio for identifying personal strengths and needed skill development in order to create a professional development plan.
   - Utilizing consumer publications and journals relevant to the education of students who are deaf or hard of hearing.
   - Actively seeking interaction with adults in dear community to maintain and improve communication skills in ASL, English signs, or cues.

- Demonstrating the ability to interact with a variety of individuals who are deaf or hard of hearing for young children to adults.
- Participating in the activities of professional organizations relevant to the education of students who are deaf or hard of hearing.

Draft 8/24/00

Content Guidelines For
Early Childhood Special Education

The Early Childhood Special Education teacher will demonstrate knowledge of and skill in:

1. The principles and theories of child growth and development and learning theory as appropriate to children with developmental delays and disabilities birth through age eight.

2. The characteristics of play and its contribution to the cognitive, social, emotional, communication, motor development and learning of children with developmental delays and disabilities birth through age eight.

3. The methods for organizing and modifying environments in collaboration with parents and other professionals to maximize the children's development through appropriate use of strategies, materials, equipment and technology.

4. The implementation and evaluation of a developmentally appropriate curriculum based upon child development, learning theory, and research for all children birth through age eight including those with developmental delays and disabilities.

5. The use of appropriate strategies to create and manage a learning environment that provides for:
   - Emphasizing play, active manipulation of concrete materials, independence in daily living, exploration of the environment, problem solving and decision making.
   - Meeting the unique needs of a diverse group of young children and builds upon their strengths.
   - Fostering friendships and interactions with others.
   - Integrating content areas such as art, music and literature through adult and child initiated themes.

6. The support of families and caregivers from diverse backgrounds including, but not limited to, racial, cultural, ethnic, and economic diversity in the identification of family concerns, priorities and resources for the purpose of incorporating the families' desires and goals for children into intervention strategies.

7. The use of appropriate communication skills for working with other persons involved in early childhood settings including parents, volunteers, support staff, advisory groups, community agencies and professionals from other disciplines.

8. The participation as a team member in the following:
   - Determining the eligibility for early intervention or special education services.
   - The formal and informal assessment of infant and young children's cognitive, social, emotional, communication, motor, adaptive and physical—including

vision and hearing development—for initial and ongoing planning and provision of appropriate services.
- The identification of family concerns, priorities and resources for the purpose of incorporating the families desires and goals for children into intervention strategies.

9. The wide variability in normal child development as well as risk factors; developmental patterns and delays representative of specific disabilities; and medical aspects of diagnosed conditions, and the effect of such differences upon children and their families.

10. Child find strategies, informed referral networks, evaluation team responsibilities, individualized family service plans, individualized education program processes, and pertinent state and federal laws, regulations and policies.

11. Professional ethics and issues of advocacy, family rights, confidentiality, and teacher liability.

12. The appropriate methods of service delivery within natural settings in the home and community such as preschools, Head Start, and family- and center-based child care.

13. The intra- and interagency collaboration and implementation of appropriate service coordination and consultation related to the care, education, and transition of young children and their families.

Content Guidelines For
Emotional Disturbance/Emotional Behavioral Disability

The Emotional Disturbance/Emotional Behavioral Disability (ED/EBD) teacher will demonstrate knowledge of and skill in:

1. The philosophical, historical, and legal foundations of special education—ED/EBD including:
   - Atypical development with the context of typical child and adolescent development.
   - Current educational terminology and definitions of students with ED/EBD including identification criteria and labeling controversies.
   - Differing perceptions of deviance, including mental health, legal-corrections, social welfare and education systems, as they apply to students with ED/EBD.
   - A variety of theoretical approaches as they apply to students with ED/EBD.
   - Current trends and issues in the field of ED/EBD.
   - Legal provisions related to the juvenile justice system.
   - Concept of least intensive or intrusive behavior management techniques.

2. The characteristics of ED/EBD learners including:
   - The effects of dysfunctional behavior on learning, including the similarities and differences between emotional/social/behavioral disorders and other disability areas.
   - The medical, psychological/psychiatric, AODA (alcohol and other drug abuse), developmental and physical characteristics as they apply to students with ED/EBD.

3. The assessment, identification and evaluation of ED/EBD learners including:
   - Specialized educational terminology used in ED/EBD as well as terminology commonly used in other systems (e.g., DSM-IV).
   - Assessment of social skills, academics, emotional & behavioral functioning, and transitional needs.
   - Functional behavioral assessment/applied behavioral analysis.
   - Interviewing skills especially related to documentation of behaviors in non-school settings.
   - Observation and data collection especially related to documentation of behavioral concerns.
   - Evaluation of IEP progress, especially in the areas of behavior and social skills.
   - Evaluation of program effectiveness, especially in non-academic areas.

4. Instructional content and practice for ED/EBD learners including:
   - Working with paraprofessionals and classroom assistants.
   - The review and utilization of current research in the field of ED/EBD to classrooms.
   - Early intervention strategies.

- Technology with students with ED/EBD, including assistive technology.
- Planning, organizing, and implementing IEPs appropriate to the cognitive and affective needs of students with ED/EBD, including principles of reinforcement and motivation, and environment.
- Selecting, developing, adopting, modifying and evaluating curricular materials applicable to students with ED/EBD.
- The design of functional classrooms and consistent classroom routines.
- Integrating academic instruction, affective education and behavior management for individual students and groups with ED/EBD.
- Teaching self-management and self-control strategies.

5. Planning and managing the teaching and learning environment for ED/EBD learners including:
   - Model programs that have been effective for student with ED/EBD.
   - Issues and techniques related to inclusion of students with ED/EBD in regular education environments.
   - Transition issue for students with ED/EBD: into and out of alternative environments (e.g., hospitals, correctional facilities, other segregated placements); from activity to activity; between educational levels (e.g., elementary to middle, middle to high school, high school to post-secondary); between child/adolescent and adult systems, including community agencies and services; from school to employment/work settings; developing social competence; and learning self advocacy.

6. Managing student behavior and teaching social interaction skills - ED/EBD including:
   - A continuum of specific management techniques/interventions for students with ED/EBD (including cooperative learning, peer tutoring, life space interviewing, identifying and teaching replacement behaviors, etc.).
   - Interventions for non-dangerous problem behaviors.
   - Individual and group contingency management strategies.
   - A continuum of placement alternatives.
   - Critical variables of behavior (e.g., topography, magnitude, locus, latency, frequency, duration).
   - Problem solving and conflict resolution.
   - Various approaches/theories of behavior management.
   - Crisis management.
   - Physical intervention strategies that are both effective and safe for students and staff.
   - Behavior intervention plans.
   - Prevention of inappropriate behavior.
   - Environmental/contextual issues.
   - Power struggles.
   - Affective education and self-control strategies.
   - Generalization to other settings.

- Interpersonal and group dynamics (including active listening).

7. Communication and collaborative partnerships including:
   - Dealing with conflict, confrontation, compromise and consensus.
   - Facilitation skills.
   - Public relations skills.
   - Understanding family systems, including non-traditional families, and the impact of ED/EBD on the family.
   - Communicating and collaborating with colleagues (regular education teachers, administrators, pupil services personnel, etc.), parents and families, professionals, and agencies external to schools.
   - Advocacy for students and self.

8. Professionalism and ethical practices including:
   - Stress management for self, including organizational and time management skills.
   - Maintaining a professional image (e.g., personal appearance, demeanor/behavior).

Content Guidelines For
Learning Disabilities

The Learning Disabilities teacher will demonstrate knowledge of and skill in:

1. The contributions of theories, philosophies and classic studies in the fields of medicine, psychology, and education to current knowledge, legislation, and practice in general and special education specific to individuals with learning disabilities.

2. The critical analysis of current issues, trends, theories, and practices in light of research evidence.

3. Major federal and state legislation, regulations, policies and related issues including due process rights and responsibilities of teachers, parents, students, and others related to evaluation, eligibility, program planning and placement of students with disabilities.

4. Terminology, definition, classification, identification, etiology, prevalence, characteristics, and cultural and social factors relevant to individuals with learning disabilities.

5. Learning disabilities as a lifelong disability that may affect cognitive information processing, physical, social, emotional, and vocational as well as academic performance.

6. The similarities and differences that exist between and among individuals with and without disabilities across the developmental spectrum and in different learning situations.

7. The ethical use and potential limitations of various assessment methods and tools for meeting the legal requirements for identification of students with disabilities, instructional program planning and ongoing monitoring of student progress, behavioral change and intervention, transition planning, and program evaluation and accountability.

8. Assessment, diagnosis, and evaluation of students with learning disabilities including:
   - Formal and informal measures including standardized test administration, curriculum-based measures, work product analysis, observation, analysis of background information, interviews and anecdotal records.
   - Ecological assessment that includes an analysis of student, environment and task.
   - Selection, administration, and interpretation of valid and reliable instruments and strategies appropriate to the purpose of the assessment.
   - Adaptation and modification of existing assessment tools to accommodate the unique abilities and needs of students with learning disabilities including skill inventories, portfolio assessments, and classroom tests.

- Communication of assessment results verbally and in writing to multiple audiences.
- Incorporation of strategies that consider the influence of diversity on assessment, eligibility, programming and placement of individuals with disabilities.
- Decisions about the participation of students with disabilities in state, district and other general education assessments and modification of assessment tools or development of alternative assessments to meet the specific needs of students with learning disabilities.

9. Instructional content and practice including:

    - General education curricula, methods, and instructional materials in reading, mathematics, oral and written language.
    - Research-based curricula and systematic and explicit instructional methods for teaching basic academic skills and learning strategies in the following areas: phonological awareness, reading decoding and fluency, reading comprehension, mathematics calculation, mathematics applications, written language, organization and study skills, assignment completion, test taking skills, appropriate social behavior, and self-advocacy.
    - Methods to help students develop and use compensatory strategies including the selection and adaptation of technology.
    - Use of ongoing assessment to monitor the effectiveness of instruction in general and special education settings.
    - Instruction and support that prepares students for careers, vocations, citizenship, independent living, recreation and leisure.

10. Development, monitoring, implementing, and revising appropriate individualized educational programs (IEPs) and daily lesson plans for students with learning disabilities including formal transition plans.

11. Methods for arranging, modifying and designing learning environments and instruction that promotes and enhances success for students with learning disabilities in general education curriculum and settings including:

    - The establishment of effective classroom routines, pace of instruction, scheduling and transitions between periods of instruction, size of groupings seating and appropriate noise level.
    - Strategies for facilitating the application and generalization of skills across settings.
    - Directing and guiding paraprofessionals, volunteers, and peer tutors.

12. Managing student behavior and social interaction skills that leads to the development of student self-awareness, self-determination, self-advocacy, and independence as a learner including:

- Classroom management techniques and effective teaching practices that assist students with learning disabilities to develop and maintain appropriate social behavior, social interaction, conflict resolution, and self-advocacy skills.
- Strategies for crisis prevention and intervention that use the lease intensive intervention consistent with the needs of the student.
- Functional behavioral assessment and intervention planning using behavior analysis principles.
- Behavioral principles including positive reinforcement, negative reinforcement, and extinction, and how the application of these principles affect student behavior and motivation.
- Applicable laws, rules, regulations, and procedural safeguards regarding the planning and implementation of behavior management strategies with students with disabilities.

13. Strategies including collaborative problem-solving and conflict resolution techniques which facilitate collaboration with general and special education teachers, parents, students, related service providers, administrators, paraprofessionals, support staff, and others to enhance joint planning, implementation and evaluation of educational and community services including transition planning and programming.

14. A commitment of professionalism and ethical practice including:

- Awareness and sensitivity to culture, religion, gender, sexual orientation, disability and level of technical knowledge among students, family and colleagues.
- Maintenance of a sense of professional efficacy by developing high expectations for life span potential of individuals with disabilities.
- Accountability for meeting student's unique needs, supporting students and their families and maintaining a high level of professional knowledge, competence and integrity in the practice of their profession.
- Professional conduct that protects the confidentiality of students and their families.

Content Guidelines For
Speech–Language Pathology

The Speech-Language Pathologist will demonstrate knowledge of and skill in:

1. The anatomy and physiology of speech and hearing mechanisms; phonetics; speech and hearing science; auditory habilitation and rehabilitation; typical and atypical speech, language, and hearing skills; and assessment techniques used in the identification of children with speech and language disabilities.

2. Learning theory as it relates to cognitive; communicative; emotional; psychomotor; and social development; as well as the ability to apply theory to evaluation, individual education program (IEP) planning, learning environments, and delivery of speech and language services.

3. Different learning styles in children; differences in regard to motivation, reinforcement and transfer of learning; as well as the ability to address individual differences in the delivery of speech and language services.

4. Meeting the individual educational needs of children with speech and language disabilities through the use of verbal, non-verbal, and/or technological modes.

5. Conducting formal and informal evaluation such as standardized test selection, authentic assessment, interpretation of assessment results, and principles of measurement in the identification of a speech and language disability, IEP development and implementation.

6. Critical thinking, problem solving, flexibility, conflict resolution and collaboration.

7. State and federal laws relating to general and special education, and the organization and structure of educational agencies in providing services for children with oral communication disabilities.

8. Cultural diversity, individual differences, and all areas of disability in the identification of children with speech and language disabilities, IEP planning and service delivery.

9. The development of collaborative relationships using a variety of resources including, but not limited to, educational, familial, societal, political, medical, professional and community settings for life long learning.

Draft 8/24/00

Content Guidelines For
Visual Impairment

The teacher of the blind or visually impaired will demonstrate knowledge of and skill in:

1. The philosophical, historical, socio-cultural, economic, and legal foundations of education for student who are blind or visually impaired and their families and the impact on educational programming.

2. The characteristics of students who are blind or visually impaired and the relationship between the disability and the following:
   - Early development (motor system, cognition, social/emotional interactions, self-help and language).
   - Social behavior and independence.
   - Language and communication.
   - Student's self esteem.
   - Additional disabilities.

3. The normal development, structure, and functions of the human visual system, eye diseases and disorders, eye reports, medications, and the resulting educational implications.

4. The development and use of the sensory systems: hearing, touch, taste, smell, and kinesthetic, and the educational implications for and individual who is blind or visually impaired.

5. The ethical considerations, legal provisions, regulations, and guidelines as they relate to the visual system, including legal and functional definitions of blindness and low vision.

6. The selection and application of traditional and alternative assessment techniques for students who are blind or visually impaired including:
   - Screening for visual impairment, functional vision evaluation, learning media assessment, and evaluation of expanded core curricular area, for referral, determining eligibility, and placement.
   - Determining the impact of visual disorders on learning and experience.
   - Identifying measurements for monitoring students' progress toward meeting individualized educational program goals.

7. The analysis, interpretation and sharing of assessment results with the student, the student's family, and other educators for the purpose of instructional planning and programming.

8. Alternative avenues leading to literacy and communication for students who are blind and visually impaired including those with multiple disabilities and is proficient in the following:
    - Braille Grade II reading and writing (using slate & stylus, brailler, as well as computers), producing Braille material, and techniques for teaching these skills, including pre-Braille.
    - Techniques for teaching students to maximize the use of their senses including residual vision, hearing, and touch.
    - Techniques for teaching use of low vision devices, handwriting, signature writing, keyboarding, and the use of unique technology (voice output, refreshable Braille, Braille translation software, etc.).
    - Awareness of alternatives for verbal and nonverbal communication, including low and high assistive technology devices, ASL, and sign systems.

9. The use of alternative methods for teaching basic concepts and accessing the core curriculum via Nemeth code, abacus, talking calculator, tactile graphics, adapted equipment & materials, and alternative organization and study techniques.

10. Teaching independence to students who are blind or visually impaired including:
    - Pre-orientation and mobility skills concepts.
    - Problem solving, reasoning and decision making.
    - Self-advocacy/determination.
    - Adaptive methods for daily living skills, social skills, recreational/leisure, physical education, critical thinking, and teaching human sexuality.
    - Transitions and planning for the future.
    - Functional life skills relating to community, personal living, and employment.

11. Correlating the teaching of the core curriculum and the expanded core curriculum including demonstrating the ability to modify materials as well as assist other school personnel (e.g. the regular classroom teacher, therapists) in understanding the need and use of modifications.

12. Effectively plan and manage the teaching and learning environment for students who are blind or visually impaired including:
    - Preparing, adapting and modifying materials (e.g. Braille, large print, outlined, highlighted), including special graphics.
    - Preparing materials for students that have multiple disabilities.
    - Designing learning environments that are multi-sensory.
    - Utilizing effective classroom and individual management skills.
    - Locating and supporting the use of the technology in a variety of environments.
    - Training professionals and paraprofessionals on the need of visually impaired students.

13. Effectively communicate and develop collaborative partnerships with families, other Professionals, and paraprofessionals.

14. Transitional issues, including early intervention to school, within school, school to post-school and planning for the future.

15. The professional organizations, publications, and journals relevant to the field of visual impairment.

DRAFT 9/1/00

General Education

Content Guidelines For Agriculture Education

An Agricultural Education teacher will demonstrate knowledge of and skills in:

1. Global agricultural systems and the natural resources required to produce food and fiber used in daily life while understanding the relationship between production and sustainability; food and fiber production, distribution, and consumption at local, national, and international levels and the complex interdependence that exists within agriculture.

2. The technology used to gather information and produce products within the food, fiber, and natural resource industries in our global marketplace; identification of the producers, processors, manufacturers, and researchers who utilize technology and the mechanical principles necessary to compete in the global marketplace; the relationship between use of technology and lifelong skills necessary for employment and existence in society.

3. Concepts and processes of leadership, citizenship and volunteerism; the role of leadership in shaping individuals, organizations, and society; and effective leadership and human relation's skills for personal growth and career success.

4. The scientific principles underlying the science and production of food, fiber, and ornamental plants and the relationship it has to daily life; the concepts of agriscience production to include aquaculture, biotechnology and food processing; the relationship between food and fiber production and consumer preferences; and the impact agriscience makes on their communities and communities throughout the world.

5. The ecological and environmental management of land and other natural resources in a sustainable manner; the interdependence, balance and agreement that needs to exist among producers, processors, manufacturers, scientists and other users of natural resources; the use of facts in making informed choices about their environment.

6. Business management and marketing in order to make complex economic choices related to the allocation of food, fiber, and natural resources; the collective role of consumers, producers, and workers in directing business and markets to process, add value, and distribute agricultural products as demanded.

7. The philosophies, principles, trends, issues and methods of agricultural education at early childhood through adolescence levels.

8. The application and integration of communication skills, social sciences, science, mathematics and computer literacy as they relate to the agricultural education curriculum.

9. Planning, coordinating, and evaluating work-based learning.

10. Establishing and maintaining the agricultural education Career and Technical Student Organization (FFA Chapter).
11. Curriculum perspectives, development and post-secondary articulation as it relates to agricultural education.
12. Career exploration, planning and development including employability skills and attitudes.

Content Guidelines In Art

An Art Education teacher will demonstrate knowledge of and skill in:

1. Art and design including:
   - Basic concepts of studio art foundations involving a balance of two-dimensional, three-dimensional, and time-based creative problem solving skills including drawing, painting, printmaking, ceramics, sculpture, craft design, photography, film, video, and related media and processes and basic skills in at least two of these areas.
   - Basic concepts of design arts foundations involving a balance of two-dimensional, three-dimensional, and time-based creative problem solving skills including architecture, urban and environment design, product and industrial design, information and communication graphic design, digital photography, film, video, computer imaging, and basic skills in at least two of these areas.
   - Art and design history, aesthetic theory, and art and design criticism, involving study of the development of past and contemporary art and design forms, contending theories of art and design, and critical methodologies of art and design in Wisconsin, the United States, and the world.
   - Advanced selected studio and design areas and in selected art and design history or theory areas including visual production, communication, thinking, understanding, and creating.
   - At least one other arts discipline's relation to the visual arts and design including music, dance, theatre or literary arts.

2. Related humanistic and behavioral studies including:
   - Sociological, anthropological, and cultural bases of the aesthetic, artistic and design expressions in various cultures and subcultures in Wisconsin, the United States and the world.
   - Psychological and cognitive science bases involving an understanding of individual development and the manner in which aesthetic experience can affect the development of the human personality including application to gifted students and to students with exceptional needs.
   - Philosophical bases related to the human potential for creative expression through art and design.

3. Related scientific and technological studies including:
   - Physical and natural science bases involving an understanding of the manner in which physical and natural forces can affect aesthetic, artistic, and design development.
   - Technological bases involving an understanding of the manner in which new technologies can affect aesthetic, artistic, and design development.
   - Mathematical bases involving an understanding of the manner in which mathematical thinking can affect aesthetic, artistic, and design development.

4. The professions of art and design education including:
    - State and national standards, curricula, and assessment in art and design education.
    - State and national professional organizations, publications and other resources in art and design education.
    - State and national policies, guidelines and laws relating to art and design education.

Content Guidelines For
Broadfield Language Arts

The Broadfield language arts teacher will demonstrate knowledge of and skill in English Literature and Composition, Journalism, and Speech Communication:

1. The interrelatedness of the language arts: speaking, listening, creating media, responding to media, reading, and writing.
2. Using language to fit a variety of audiences and purposes.
3. The developmental processes whereby individuals acquire, understand, and use oral, visual, and written language.
4. The structure and history of the English language including traditional and modern grammars and the integration of these studies within the English Language Arts program.
5. A breadth of literary expression by female and male authors, both classic and contemporary, including a representative body of
    - American literature encompassing works of diverse cultural and ethnic groups;
    - Literature of the British Isles and of other English speaking countries;
    - International literature;
    - Young adult literature.
6. Historical and recent rhetorical theories regarding aims and modes of written and oral discourse, cultural and situational factors, and considerations of audience.
7. Strategies for formulating questions and conducting research using a variety of sources and reporting findings in a variety of formats and media.
8. Representative works of major writers, including Shakespeare.
9. The function and variety of literary forms, including fiction, nonfiction, drama and poetry.
10. Approaches to analyzing, interpreting, evaluating, and appreciating print and non-print texts, reflecting interactions among reader, text, and context.
11. Writing as a recursive thinking process including prewriting, drafting, revising, editing, publishing, and presenting.
12. Writing, speaking, and creating media for a variety of audiences including technical and professional.
13. A wide repertoire of strategies for teaching reading.

14. Effective listening and viewing in a variety of contexts, including interpersonal, media-related, and social.

15. Various approaches to assessing oral, visual, and written communication such as analytical, holistic, and trait scoring, peer evaluation, self-evaluation, portfolios, and conferences.

16. Designing curriculum and instruction within the framework of Wisconsin's Model Academic Standards in English language Arts and implementing local and state assessment activities based upon those standards.

17. The structure and function of American mass media (Meaning the forms of communication designed and distributed to reach an audience by various means: print, broadcast, cable, film, internet, and other forms. The audience may be relatively heterogeneous or homogeneous, narrow or broad) with particular emphasis on Journalism including:

    - The history and evolution of mass media;
    - The theories of mass communication;
    - Mass media in the context of the American economic system;
    - Mass media in the context of the American political system;
    - Mass media in the context of the American social system;
    - Journalism as part of the American mass media.

18. The similarities and differences among media including:

    - The functions of informing, persuading, advocating, and entertaining;
    - The forms of news and information, commentary and advocacy, advertising and persuasion, and entertainment;
    - Style and message construction for newspapers, magazines, radio, television, and film.

19. The diversity of audiences' needs, interests, motivations, abilities, backgrounds, and cultures.

20. The processes of Journalism including:

    - The stages of information gathering; verification; creating the story in words, images, graphics, or sounds; editing; and production;
    - Researching and gathering information (verbal and visual) required to create the story in words, images, graphics, or sounds;
    - The design of product appropriate to the medium and situation;
    - The use of language appropriate to a variety of audiences and purposes;
    - Integrating visual and verbal material for various media including newspapers, magazines, radio, television, and film.

21. The essential journalistic norms of fairness, accuracy, and balance.

22. The rights and responsibilities of Journalism including:
    - Rights under the US Constitution First Amendment and state law, particularly regarding student media;
    - Court decisions;
    - Libel, slander, and copyright laws; right of privacy; commercial speech and broadcast regulation; plagiarism; fabrication; and open record and open meeting laws;
    - Professional codes of ethics.

23. The role and function of the Journalism advisor including:
    - Rights and responsibilities.
    - Staff organization.
    - Budgeting, financing, and relationships with vendors.
    - Production technology.
    - Relationships with faculty, administration, parents, and the community.
    - Post production evaluation techniques, including use of rating services.

24. Relevant careers in Journalism and related media:
    - Education requirements;
    - Sources of additional information.

25. Classical and modern development of oral argumentation and persuasion.

26. Contemporary theories of oral communication including considerations of purpose, source, setting, audience, subject, and media.

27. Intrapersonal and interpersonal oral communication, including both verbal and nonverbal components.

28. Group communication including structure, dynamics, and roles.

29. Public speaking including invention, organization, style, and delivery.

30. Critical response skills in interpersonal, intrapersonal, and public communication contexts.

31. Listening processes, methodologies, and strategies to improve listening.

32. Ethics and individual responsibility associated with competent and effective communication in society.

33. Developing, directing, and evaluating co-curricular speech activities including pupil experiences in Debate and Forensics.

34. Communication anxiety and its remediation.

Content Guidelines For
Broadfield Science

The teacher of Broadfield Science will demonstrate knowledge of and skill in:

A: Professional development for teachers of science requires learning essential science content through the perspectives and methods of inquiry. Science learning experiences for teachers must

- Involve teachers in actively investigating phenomena that can be studied scientifically, interpreting results, and making sense of findings consistent with currently accepted scientific understanding.
- Address issues, events, problems, or topics significant in science and of interest to participants.
- Introduce teachers to scientific literature, media, and technological resources that expand their science knowledge and their ability to access further knowledge.
- Build on the teacher's current science understanding, ability, and attitudes.
- Incorporate ongoing reflection on the process and outcomes of understanding science through inquiry.
- Encourage and support teachers in efforts to collaborate.

B: Professional development for teachers of science requires integrating knowledge of science, learning, pedagogy, and students; it also requires applying that knowledge to science teaching. Learning experiences for teachers of science must

- Connect and integrate all pertinent aspects of science and science education.
- Occur in a variety of places where effective science teaching can be illustrated and modeled, permitting teachers to struggle with real situations and expand their knowledge and skills in appropriate contexts.
- Address teachers' needs as learners and build on their current knowledge of science content, teaching, and learning.
- Use inquiry, reflection, interpretation of research, modeling, and guided practice to build understanding and skill in science teaching.

C: Professional development for teachers of science requires building understanding and ability for lifelong learning. Professional development activities must

- Provide regular, frequent opportunities for individual and collegial examination and reflection on classroom and institutional practice.
- Provide opportunities for teachers to receive feedback about their teaching and to understand, analyze, and apply that feedback to improve their practice.
- Provide opportunities for teachers to learn and use various tools and techniques for self-reflection and collegial reflection, such as peer coaching, portfolios, and journals.

- Support the sharing of teacher expertise by preparing and using mentors, teacher advisors, coaches, lead teachers, and resource teachers to provide professional development opportunities.
- Provide opportunities to know and have access to existing research and experiential knowledge.
- Provide opportunities to learn and use the skills of research to generate new knowledge about science and the teaching and learning of science.

D: Professional development programs for teachers of science must be coherent and integrated. Quality preservice and inservice programs are characterized by

- Clear, shared goals based on a vision of science learning, teaching, and teacher development congruent with the National Science Education Standards.
- Integration and coordination of the program components so that understanding and ability can be built over time, reinforced continuously, and practiced in a variety of situations.
- Options that recognize the developmental nature of teacher professional growth and individual and group interests, as well as the needs of teachers who have varying degrees of experience, professional expertise, and proficiency.
- Collaboration among the people involved in programs, including teachers, teacher educators, teacher unions, scientists, administrators, policy makers, members of professional and scientific organizations, parents, and business people, with clear respect for the perspectives and expertise of each.
- Recognition of the history, culture, and organization of the school environment.
- Continuous program assessment that captures the perspectives of all those involved, uses a variety of strategies, focuses on the process and effects of the program, and feeds directly into program improvement and effects of the program, and feeds directly into program improvement and evaluation.

Specifics for PI 34 in Broad-field Science:

PI 34 Standard 1. Teachers know the subjects they are teaching.

The teacher understands the central concepts, tools of inquiry, and structures of the disciplines he/she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

Teachers of science shall demonstrate knowledge and understandings sufficient to teach science to students (ages 10-21) in the following areas:

1. Science classroom safety standards, practices, and procedures
2. The interconnectedness of science, science connections
3. Science as inquiry
4. Physical science including physics and chemistry
5. Life science including biology and environmental science

6. Earth and space science
7. Science and technology
8. Science in personal and social perspectives
9. History and nature of science

Teachers of science shall demonstrate abilities to:

1. Understand the central concepts, tool of inquiry, and structures of the discipline he/she teaches
2. Create learning experiences that make the subject matter meaningful for students.
3. Select science content consistent with the *Wisconsin's Model Academic Standards in Science* and adapt and design curricula to meet the interests, knowledge, understandings, abilities, and experiences of students.
4. Encourage and model the skills of scientific inquiry, as well as curiosity, openness to new ideas and data, and skepticism.
5. Plan inquiry based science programs.

PI 34 Standard 2. Teachers know how children grow.

The teacher understands how children learn and develop and can provide learning opportunities that support their intellectual, social, and personal development.

Teachers of science shall demonstrate abilities to:

1. Understand how student learn and develop
2. Provide learning opportunities that support student intellectual, social, and personal development.

PI 34 Standard 3. Teachers understand that children learn differently.

The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners, including students with disabilities.

Teachers of science shall demonstrate abilities to:

1. Understand how students differ in their approaches to learning
2. Creates instructional opportunities that are adapted to diverse learners, including students with disabilities.
3. Recognize and respond to student diversity and encourage all students to participate fully in science learning.

PI 34 Standard 4. Teachers know how to teach.

The teacher understands and uses a variety of instructional strategies, including the use of technology, to encourage students' development of critical-thinking, problem-solving, and performance skills.

Teachers of science shall demonstrate abilities to:

1. Understand and use a variety of instructional strategies, including the use of technology, to encourage students' development of critical thinking, problem solving, and performance skills.
2. Orchestrate discourse among students about scientific ideas.
3. Challenge students to accept and share responsibility for their own learning in science.
4. Create a setting for student work that is flexible and supportive of science inquiry.
5. Nurture collaboration among students.
6. Structure and facilitate ongoing formal and informal discussions based on shared understanding of rules of scientific discourse.
7. Model and emphasize the skill, attitudes, and values of scientific inquiry.
8. Focus and support inquiry while interacting with students.

PI 34 Standard 5. Teachers know how to manage a classroom.

The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

Teachers of science shall demonstrate abilities to:

1. Understand individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning and self-motivation.
2. Develop a framework of year long and short-term science learning goals for students.
3. Plan a school science program.
4. Ensure a safe science classroom
5. Structure the time available so students can engage in extended investigations.
6. Create a setting for student work that is flexible and supportive of science inquiry
7. Manage science tools, materials, media, and technological resources.
8. Identify and use resources outside the school.
9. Engage students in designing a learning environment.

PI 34 Standard 6. Teachers communicate well.

The teacher uses knowledge of effective verbal and nonverbal communication techniques as well as instructional media and technology to foster active inquiry, collaboration, and supportive interaction in the classroom.

Teachers of science shall demonstrate abilities to:

1. Use knowledge of effective verbal and nonverbal communication techniques as well as instructional media and technology to foster active inquiry, collaboration, and supportive interaction in the classroom.

PI 34 Standard 7. Teachers are able to plan different kinds of lessons.

The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

Teachers of science shall demonstrate abilities to:

1. Plan instruction based on knowledge subject matter, students, the community, and curriculum goals.
2. Use Wisconsin Model Academic Standards in Science in the development of lessons.
3. Engage students in designing the learning environment.

PI 34 Standard 8. Teachers know how to test for student progress.

The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.

Teachers of science shall demonstrate abilities to:

1. Understand and use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.
2. Select assessment strategies that support development of student understanding.
3. Use multiple methods to assess student understanding and ability.
4. Systematically gather and analyze assessment data to guide teaching.
5. Guide students in self-assessment.

PI 34 Standard 9. Teachers are able to evaluate themselves.

The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

Teachers of science shall demonstrate abilities to:

1. Be a reflective practitioner who continually evaluates the effectiveness of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.
2. Use student data, observations of teaching, and interactions with colleagues to reflect on and improve teaching practice.
3. Plan and implement professional growth and development strategies.

PI 34 Standard 10. Teachers are connected with other teachers and the community.

The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

Teachers of science shall demonstrate abilities to:

1. Foster relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well being.
2. Use student data, observations of teaching, and interactions with colleagues to report student achievement and opportunities to learn to students, teachers, parents, policy makers, and the general public.
3. Work with colleagues within and across disciplines and grade levels.

Note: The above science teaching abilities were adapted from the National Science Education Standards Teaching Standards, pages 27 through 53 and reprinted here: Teaching Standard A:

Teachers of science plan an inquiry-based science program for their students. In doing this, teachers

- Develop a framework of yearlong and short-term goals for students.
- Select science content and adapt and design curricula to meet the interests, knowledge, understanding, abilities, and experiences of students.
- Select teaching and assessment strategies that support the development of student understanding and nurture a community of science learners.
- Work together as colleagues within and across disciplines and grade levels.

Teaching Standard B:
Teachers of science guide and facilitate learning. In doing this, teachers

- Focus and support inquiries while interacting with students.
- Orchestrate discourse among students about scientific ideas.
- Challenge students to accept and share responsibility for their own learning.
- Recognize and respond to student diversity and encourage all students to participate fully in science learning.
- Encourage and model the skills of scientific inquiry, as well as the curiosity, openness to new ideas and data, and skepticism that characterize science.

Teaching Standard C:
Teachers of science engage in ongoing assessment of their teaching and of student learning. In doing this, teachers

- Use multiple methods and systematically gather data about student understanding and ability.
- Analyze assessment data to guide teaching.
- Guide students in self-assessment.
- Use student data, observations of teaching, and interactions with colleagues to reflect on and improve teaching practice.

- Use student data, observations of teaching, and interactions with colleagues to report student achievement and opportunities to learn to students, teachers, parents, policy makers, and the general public.

Teaching Standard D:
Teachers of science design and manage learning environments that provide students with the time, space, and resources needed for learning science. In doing this, teachers

- Structure the time available so that students are able to engage in extended investigations.
- Create a setting for student work that is flexible and supportive of science inquiry.
- Ensure a safe working environment.
- Make the available science tools, materials, media, and technological resources accessible to students.
- Identify and use resources outside the school.
- Engage students in designing the learning environment.

Teaching Standard E:
Teachers of science develop communities of science learners that reflect the intellectual rigor of scientific inquiry and the attitudes and social values conducive to science learning. In doing this, teachers

- Display and demand respect for the diverse ideas, skills, and experiences of all students.
- Enable students to have a significant voice in decisions about the content and context of their work and require students to take responsibility for the learning of all members of the community.
- Nurture collaboration among students.
- Structure and facilitate ongoing formal and informal discussion based on a shared understanding of rules of scientific discourse.
- Model and emphasize the skills, attitudes, and values of scientific inquiry.

Teaching Standard F:
Teachers of science actively participate in the ongoing planning and development of the school science program. In doing this, teachers

- Plan and develop the school science program.
- Participate in decisions concerning the allocation of time and other resources to the science program.
- Participate fully in planning and implementing professional growth and development strategies for themselves and their colleagues.

Wisconsin's Model Academic Standards for Science Content Standards

A. Science Connections

CONTENT STANDARD

Students in Wisconsin will understand that among the science disciplines there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; and form and function.

B. Nature of Science

CONTENT STANDARD

Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.

C. Science Inquiry

CONTENT STANDARD

Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others.

D. Physical Science

CONTENT STANDARD

Students in Wisconsin will demonstrate an understanding of the physical and chemical properties of matter, the forms and properties of energy, and the ways in which matter and energy interact.

E. Earth and Space Science

CONTENT STANDARD

Students in Wisconsin will demonstrate an understanding of the structure and systems of the earth and other bodies in the universe and their interactions.

F. Life and Environmental Science

CONTENT STANDARD

Students in Wisconsin will demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment.

G. Science Applications

CONTENT STANDARD

Students in Wisconsin will demonstrate an understanding of the relationship between science and technology and the ways in which that relationship influences human activities.

H. Science in Social and Personal Perspectives

CONTENT STANDARD
Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live.

Content Guidelines For
Broadfield Social Studies

Social Studies teachers will demonstrate knowledge of and skill in:

1. The history, organization, conceptual framework, modes of inquiry, ethics and current research and methodologies of the disciplines within the *Wisconsin Model Academic Standards for the Social Studies*- history, geography, political science, economics, anthropology, psychology, law, archaeology, sociology, and citizenship.

2. The major themes, basic principles, philosophic bases, ethics, assumptions, perspectives and schools of thought of the disciplines of history, geography, political science, economics, anthropology, psychology, law, archaeology, sociology, and citizenship.

3. The practical applications of the methodology appropriate to the disciplines.

4. The application of knowledge of each discipline to past and present economic, social, cultural, and political events and situations.

5. The skills associated with the discipline including:
   - Communication.
     - Data-gathering.
     - Model building.
     - Problem solving.
     - Policy making.
     - Narrative explanation.
   - Decision-making.
     - Scenario building.
     - Identification of multiple perspectives.
     - The ability to observe, organize, interpret, infer, analyze, question, evaluate, synthesize, form hypotheses, recognize bias, weigh alternatives and develop participatory skills.

6. The interdisciplinary nature and integrative aspects of the disciplines in social studies and their connections with disciplines other than social studies.

7. The strategies for conducting investigations and research using multiple primary and secondary sources.

8. The *Wisconsin Model Academic Standards for Social Studies* in order to assess the evidence or assessment of student understanding and develop curriculum.

9. Professional organizations, publications, and resources in social studies.

10. State and national laws and current national leadership initiatives in the discipline.

11. Geography:

    a. Constructing, using and refining mental maps of locales, regions, and the world that demonstrate their understanding of relative location, direction, size and shape.

    b. Creating, interpreting, using and distinguishing various representation of Earth such as maps, globes and photographs, and use appropriate geographic tools such as atlases, data bases, systems, charts, graphs, and maps to generate, manipulate, and interpret information, computer generated information aerial and satellite images and three dimensional models.

    c. Estimating and calculating distance, scale, area and density to distinguish spatial distribution patterns.

    d. Locating, distinguishing, describing the relationships among varying regional and global patterns of geographic phenomena such as landforms, climate and natural resources.

    e. Physical system changes and their impacts on humans both locally and globally.

    f. How people create places from the interplay of culture, human needs, systems of values and ideals, and government policies.

    g. Examining, interpreting and analyzing the interactions of human beings and their physical environments.

    h. The ways Earth' physical features have changed over time; and describe and assess the ways historical events have influenced and have been influenced by physical and human geographic features.

    i. Analyzing social and economic effects of environmental changes and crises.

    j. Comparing, and evaluating existing alternative uses of resources and land use in communities, regions, nations, and the world.

    k. The changes caused by past decisions which have altered the spatial arrangement of their local communities and to speculate about the impacts of current discussions which may cause change to the community.

12. History:

    a. Tracing and analyzing chronological periods and identifying the relationships of significant social, political, and economic themes and key concepts including multiple perspectives and historical and contemporary viewpoints in United States history and western and non-western history from antiquity to modern

time as identified in the *Wisconsin Model Academic Standards for Social Studies.*

b. Conducting historical research and analysis using primary and secondary sources and historiographic themes to construct historical arguments.

c. Applying historical knowledge to current issues, situations and events in the world.

d. The role of change brought about by technological, philosophic, religious, cultural, political, and economic forces.

e. The interaction of global and national interests in the modern world.

f. How historical knowledge and the concept of time are socially influenced constructions that lead historians to be selective in the questions asked and the evidence used.

13. Political science and citizenship:

a. Explaining and analyzing:

b. Historical perspectives.

c. The nature of different political systems.

d. The nature of law.

e. Local, state, national tribal, and global political systems.

f. Political thought.

g. The nature of democratic citizenship.

h. Political legitimacy.

i. Political parties and political interest groups.

j. The nature of political decision-making.

k. Political power and authority.

l. Ethics.

m. International politics.

n. The historical development and interpretation of United States principles, documents, Supreme Court decisions and ideals across time.

o. The federal system and separation of powers at the local, state, national and tribal levels in the United States and compare to ideologies and structures of different political systems.

p. The rights and responsibilities and duties of citizens in communities, nation, and world and their role in defining the common good and influencing public policy.

q. Evaluating the relationships among countries of the world including the role of international organizations.

r. Recognizing the purpose of government and the evolving nature of governments and non-governmental organizations.

14. Economics:

a. The principles of microeconomics including fundamental concepts and the characteristics of economic systems including market, tradition, and command.

b. The principles of macroeconomics including role of government, fiscal policy, and monetary policy.

c. The principles of money and banking including central banks, financial markets, savings, investing, and personal finance.

d. The American economic systems, its institutions and it historical development.

e. Analyzing persistent economic problems including market and government failures and the application of economic principles to other social issues.

f. The principles of international economics including trade, interdependence, international economic organizations and international exchange.

15. Anthropology:

a. Describing and analyzing the major components that make up a culture.

b. The major cultural areas of the world and representative societies from each of the areas.

c. How people from various cultural perspectives and frames of reference may interpret data and experiences.

d. The factors that lead to conflict and cooperation between cultures, how conflicts are resolved and how cooperation is sustained.

e. The cultures of American Indian tribes and bands in Wisconsin.

16. Sociology

a. Describing and applying each of the sociological perspective (functionalist, conflict, and interactionist) methods of social research and the contributions of major theorists in sociology.

b. The key concepts of culture and/or society, socialization and the self and social structure.

c. Distinguishing between primary and secondary groups; peer and primary groups; and recognizing characteristics of informal and formal structures within an organization.

d. Methods of social control and differentiate between deviance and crime.

e. Social stratification and social inequality and its relation to race, ethnicity, gender and age and their relationship to interactions between individuals, groups and institutions in society.

f. Analyzing the function of the social institutions of family, the economy, politics, religion, education, science/technology and arts and entertainment and how they further both continuity and change, meet individual needs, and promote the common good in contemporary and historical settings.

g. Comparing and contrasting the functionalist and conflict perspectives of these institutions.

h. The demographic concepts which influence changes in population such as migration, industrialization, urbanization and suburbanization.

i. The theories and types of collective behavior, social movements and social change.

17. Psychology

a. The basic structures and function of the brain and central nervous system in dictating their impact on individuals' emotions, ability to learn, attend states of consciousness, motivation, sensation and perception of their environment.

b. The sources of stress, physiological and psychological reactions to stress and strategies for dealing with stress and promoting individual health.

c. Describing human development as a lifelong process comparing stage theories of development (nature/nurture) and exploring sources of individual developmental differences (personality formation, nature of intelligence etc.).

d. Distinguishing between healthy and disordered behavior by explaining the origins, characteristics and major categories of disordered behavior.

e. The practical application and ethical issues involved in contemporary treatment therapies.

Draft 8/20/01

Content Guidelines For
Business Education

The Business Education teacher will demonstrate knowledge of and skill in:

1. Career development, communications, economics, entrepreneurship, financial procedures, information systems/technology, international business, interpersonal and leadership skills, marketing, principles of law and principles of management.

2. Basic business procedures, the role of business in a free enterprise system, ethics, leadership, consumer education, the use and application of technology in all areas of business education, and management theories.

3. The philosophy and objectives of career and technical education; occupational technology; planning, organizing, and administering an occupationally-oriented program; planning and organizing advisory committees; job requirements and business career opportunities; state and federal legislation that impacts business education; and new and emerging educational programs or initiatives that can affect business programs.

4. Business through a variety of work experiences in business and active involvement in a professional business student organization, service-oriented community or on-campus organization.

5. The societal context of business; educational planning; interdisciplinary team teaching; identifying and accessing the resources which provide support for the instructional program; educational laboratory facility planning; classroom, building, district, and community technology networks; and business program development and implementation.

6. Educational research; integrated curricula; the relationship of learning styles to instructional methods and student assessment; career guidance; and school-to-work transition including, but not limited to, work-based learning and technical preparation (Tech Prep).

Draft 8/21/00

Content Guidelines For
Computer Science

Content Guidelines For Dance

The Dance education teacher will demonstrate knowledge of and skill in:

1. Performance, including:
   - Performing artistically in at least one style of dance.
   - Artistic self-expression in dance.
   - Performing with sensitivity and proficiency in solo or group ensembles.

2. Creative abilities, including:
   - Using improvisation to explore, discover, and create movement phrases.
   - Creating dances, exploring advanced compositional elements, including unison, contrast, abstraction, and repetition; and forms such as palindrome, theme and variation, rondo, round, etc.

3. The development, demonstration, and teaching of a variety of dance styles, such as ballet, modern, jazz, ballroom, ethnic, folk.

4. The structure and functioning of the human body related to movement skills.

5. Dance accompaniment and music.

6. The basic essentials of stage craft and stage production and of how to direct performing and recreational dance groups.

7. Analysis and evaluation, including:
   - Developing criteria and apply them to their work and that of others.
   - Self-assessment and determining ways to improve.
   - Analyzing dance in terms of the choreographer's intent.
   - Identifying and demonstrating dance movement elements and skills.
   - Analyzing performance and assisting performers in achieving an accurate and artistic interpretation.

8. Connecting dance with other contexts and settings, including:
   - Relating historical, social, and artistic developments to dance of various periods.
   - Connecting dance with other disciplines, the community, and healthful living.

9. The abilities necessary to plan and implement dance instruction, including:
   - Stating a philosophy of dance education and designing, creating, and teaching a comprehensive, balanced, and sequential program of dance instruction of high standards, aligned with that philosophy and based on the Wisconsin Dance Standards and the Wisconsin Dance Curriculum Guide.

- Creating curriculum and planning instruction with other school staff that connects dance with other art forms as well as with other core curricular subjects in order to provide students with an interdisciplinary learning experience.
- How the physical, psychological, and emotional development of pupils from early childhood through adolescence influences the learning sequence in dance.
- A technical knowledge and an ability to perform a variety of dance movements and styles.
- The construction or selection of appropriate adaptive techniques and strategies to help special needs students achieve dance goals as well as non-dance developmental needs.
- The construction, appropriate use, and limitations of various assessment models and strategies, such as selected response and performance assessments; embedded assessment; student peer- and self-assessment; check-lists and rubrics; and the use of portfolios in instruction, learning, and assessment.
- Planning dance instruction appropriate to the level of pupil interest, aptitude, and achievement at all levels, early childhood through adolescence.

Content Guidelines For
Early Childhood

The Early Childhood teacher will demonstrate knowledge of and skills in:

1. The principles and theories of child growth and development and learning theory as appropriate to children birth through age eight.
2. The characteristics of play and its contribution to the cognitive, social, emotional, communication, motor development and learning theory of children birth through age eight.
3. The theories and principles of classroom organization and management based upon child development and learning of children birth through age eight.
4. The study, implementation, and evaluation of early childhood curriculum based upon child development, learning theory, and research for all children birth through age 8.
5. The strategies in curriculum development, implementation, and evaluation based upon child development and learning theory and educational research and practice in the areas of children's literature, creative arts, environmental education, mathematics, motor development, physical and mental health, science, and social science.
6. The interrelationships among the fields of knowledge and the implementation of a balanced and integrated curriculum for the early childhood level.
7. The use of appropriate strategies designed to develop skills in supporting families from diverse backgrounds as well as in promoting parent education and family involvement in the early childhood level program.
8. The application of appropriate principles of professionalism, program and staff development, supervision and evaluation of support staff, advisory groups, community agencies and resources, and pupil services personnel as related early childhood programs.
9. Developmentally appropriate assessment tools with children birth through age eight.
10. The identification and teaching of children birth through age eight with special needs and talents.
11. The implementation of instructional approaches which contribute to the preparation of pupils for work including career exploration, practical application of the basic skills and employability skills and attitudes.

Content Guidelines For
Early Childhood Through Middle Childhood

Contained in Separate Document Based on WI Model Academic Standards

Content Guidelines For
Earth and Space Science

The teacher of Earth and Space Science will demonstrate knowledge of and skill in:

Professional Development Standard A:

Professional development for teachers of science requires learning essential science content through the perspectives and methods of inquiry. Science learning experiences for teachers must

- Involve teachers in actively investigating phenomena that can be studied scientifically, interpreting results, and making sense of findings consistent with currently accepted scientific understanding.

- Address issues, events, problems, or topics significant in science and of interest to participants.

- Introduce teachers to scientific literature, media, and technological resources that expand their science knowledge and their ability to access further knowledge.

- Build on the teacher's current science understanding, ability, and attitudes.

- Incorporate ongoing reflection on the process and outcomes of understanding science through inquiry.

- Encourage and support teachers in efforts to collaborate.

Professional Development Standard B:

Professional development for teachers of science requires integrating knowledge of science, learning, pedagogy, and students; it also requires applying that knowledge to science teaching. Learning experiences for teachers of science must

- Connect and integrate all pertinent aspects of science and science education.

- Occur in a variety of places where effective science teaching can be illustrated and modeled, permitting teachers to struggle with real situations and expand their knowledge and skills in appropriate contexts.

- Address teachers' needs as learners and build on their current knowledge of science content, teaching, and learning.

- Use inquiry, reflection, interpretation of research, modeling, and guided practice to build understanding and skill in science teaching.

Professional Development Standard C:

Professional development for teachers of science requires building understanding and ability for lifelong learning. Professional development activities must

- Provide regular, frequent opportunities for individual and collegial examination and reflection on classroom and institutional practice.

- Provide opportunities for teachers to receive feedback about their teaching and to understand, analyze, and apply that feedback to improve their practice.

- Provide opportunities for teachers to learn and use various tools and techniques for self-reflection and collegial reflection, such as peer coaching, portfolios, and journals.

- Support the sharing of teacher expertise by preparing and using mentors, teacher advisors, coaches, lead teachers, and resource teachers to provide professional development opportunities.

- Provide opportunities to know and have access to existing research and experiential knowledge.

- Provide opportunities to learn and use the skills of research to generate new knowledge about science and the teaching and learning of science.

Professional Development Standard D:

Professional development programs for teachers of science must be coherent and integrated. Quality preservice and inservice programs are characterized by

- Clear, shared goals based on a vision of science learning, teaching, and teacher development congruent with the *National Science Education Standards*.

- Integration and coordination of the program components so that understanding and ability can be built over time, reinforced continuously, and practiced in a variety of situations.

- Options that recognize the developmental nature of teacher professional growth and individual and group interests, as well as the needs of teachers who have varying degrees of experience, professional expertise, and proficiency.

- Collaboration among the people involved in programs, including teachers, teacher educators, teacher unions, scientists, administrators, policy makers, members of professional and scientific organizations, parents, and business people, with clear respect for the perspectives and expertise of each.

- Recognition of the history, culture, and organization of the school environment.

- Continuous program assessment that captures the perspectives of all those involved, uses a variety of strategies, focuses on the process and effects of the program, and feeds directly into program improvement and evaluation.

Earth and Space Science—Part 1

The information to follow was developed as a result of *Wisconsin's Model Academic Standards for Science* and based on the *National Science Education Teaching Standards.*

PI 34 Standard 1. Teachers know the subjects they are teaching.

The teacher understands the central concepts, tools of inquiry, and structures of the disciplines he/she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

Teachers of science shall demonstrate knowledge and understandings sufficient to teach subject matter science to students (ages 10-21) in the following areas:

1) Science classroom safety standards, practices, and procedures
2) The interconnectedness of science, science connections
3) Science as inquiry
4) Physical science including physics and chemistry
5) Life science including biology and environmental science
6) Earth and space science
7) Science and technology
8) Science in personal and social perspectives
9) History and nature of science

Teachers of science shall demonstrate abilities to:

1) Understand the central concepts, tool of inquiry, and structures of the discipline he/she teaches
2) **Create learning experiences that make the subject matter meaningful for students.**
3) Select science content consistent with the *Wisconsin's Model Academic Standards in Science* and adapt and design curricula to meet the interests, knowledge, understandings, abilities, and experiences of students.
4) Encourage and model the skills of scientific inquiry, as well as curiosity, openness to new ideas and data, and skepticism.
5) Plan inquiry based science programs.

Earth and Space Science—Part 2

The following content has been taken from *Wisconsin's Model Academic Standards for Science* and provide guidelines for a license in Earth and space science.

Teachers must have sufficient background knowledge in order to teach Earth and space science, Earth science, space science, or astronomy by knowing about

- Properties of Earth materials,
- Objects in the sky,
- Changes in the Earth and sky,
- Structure of Earth system,
- Earth's history,
- Earth in the solar system,
- Energy in the Earth system,
- Geochemical cycles,
- The origin and evolution of the Earth system, and
- The origin and evolution of the universe.

PI 34 Standard 2. Teachers know how children grow.

The teacher understands how children learn and develop and can provide learning opportunities that support their intellectual, social, and personal development.

Teachers of science shall demonstrate abilities to:

1) Understand how student learn and develop
2) Provide learning opportunities that support student intellectual, social, and personal development.

PI 34 Standard 3. Teachers understand that children learn differently.

The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners, including students with disabilities.

Teachers of science shall demonstrate abilities to:

1) Understand how students differ in their approaches to learning
2) Creates instructional opportunities that are adapted to diverse learners, including students with disabilities.
3) Recognize and respond to student diversity and encourage all students to participate fully in science learning.

PI 34 Standard 4. Teachers know how to teach.

The teacher understands and uses a variety of instructional strategies, including the use of technology, to encourage students' development of critical-thinking, problem-solving, and performance skills.

Teachers of science shall demonstrate abilities to:

1) Understand and use a variety of instructional strategies, including the use of technology, to encourage students' development of critical thinking, problem solving, and performance skills.
2) Orchestrate discourse among students about scientific ideas.
3) Challenge students to accept and share responsibility for their own learning in science.
4) Create a setting for student work that is flexible and supportive of science inquiry.
5) Nurture collaboration among students.
6) Structure and facilitate ongoing formal and informal discussions based on shared understanding of rules of scientific discourse.
7) Model and emphasize the skill, attitudes, and values of scientific inquiry.
8) Focus and support inquiry while interacting with students.

PI 34 Standard 5. Teachers know how to manage a classroom.

The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

Teachers of science shall demonstrate abilities to:

1) Understand individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning and self-motivation.
2) Develop a framework of year long and short-term science learning goals for students.
3) Plan a school science program.
4) Ensure a safe science classroom
5) Structure the time available so students can engage in extended investigations.
6) Create a setting for student work that is flexible and supportive of science inquiry
7) Manage science tools, materials, media, and technological resources.
8) Identify and use resources outside the school.
9) Engage students in designing a learning environment.

PI 34 Standard 6. Teachers communicate well.

The teacher uses knowledge of effective verbal and nonverbal communication techniques as well as instructional media and technology to foster active inquiry, collaboration, and supportive interaction in the classroom.

Teachers of science shall demonstrate abilities to:
Use knowledge of effective verbal and nonverbal communication techniques as well as instructional media and technology to foster active inquiry, collaboration, and supportive interaction in the classroom.

PI 34 Standard 7. Teachers are able to plan different kinds of lessons.

The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

Teachers of science shall demonstrate abilities to:
1) Plan instruction based on knowledge subject matter, students, the community, and curriculum goals.
2) Use *Wisconsin Model Academic Standards in Science* in the development of lessons.
3) Engage students in designing the learning environment.

PI 34 Standard 8. Teachers know how to test for student progress.

The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.

Teachers of science shall demonstrate abilities to:
1) Understand and use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.
2) Select assessment strategies that support development of student understanding.
3) Use multiple methods to assess student understanding and ability.
4) Systematically gather and analyze assessment data to guide teaching.
5) Guide students in self-assessment.

PI 34 Standard 9. Teachers are able to evaluate themselves.

The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

Teachers of science shall demonstrate abilities to:
1) Be a reflective practitioner who continually evaluates the effectiveness of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.
2) Use student data, observations of teaching, and interactions with colleagues to reflect on and improve teaching practice.
3) Plan and implement professional growth and development strategies.

PI 34 Standard 10. Teachers are connected with other teachers and the community.

The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

Teachers of science shall demonstrate abilities to:

1) Foster relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well being.
2) Use student data, observations of teaching, and interactions with colleagues to report student achievement and opportunities to learn to students, teachers, parents, policy makers, and the general public.
3) Work with colleagues within and across disciplines and grade levels.

Note: The above science teaching abilities were adapted from the National Science Education Teaching Standards, pages 27 through 53 and reprinted here:

Teaching Standard A:
Teachers of science plan an inquiry-based science program for their students. In doing this, teachers

- Develop a framework of yearlong and short-term goals for students.
- Select science content and adapt and design curricula to meet the interests, knowledge, understanding, abilities, and experiences of students.
- Select teaching and assessment strategies that support the development of student understanding and nurture a community of science learners.
- Work together as colleagues within and across disciplines and grade levels.

Teaching Standard B:
Teachers of science guide and facilitate learning. In doing this, teachers

- Focus and support inquiries while interacting with students.
- Orchestrate discourse among students about scientific ideas.
- Challenge students to accept and share responsibility for their own learning.
- Recognize and respond to student diversity and encourage all students to participate fully in science learning.
- Encourage and model the skills of scientific inquiry, as well as the curiosity, openness to new ideas and data, and skepticism that characterize science.

Teaching Standard C:
Teachers of science engage in ongoing assessment of their teaching and of student learning. In doing this, teachers

- Use multiple methods and systematically gather data about student understanding and ability.
- Analyze assessment data to guide teaching.

- Guide students in self-assessment.

- Use student data, observations of teaching, and interactions with colleagues to reflect on and improve teaching practice.

- Use student data, observations of teaching, and interactions with colleagues to report student achievement and opportunities to learn to students, teachers, parents, policy makers, and the general public.

Teaching Standard D:
Teachers of science design and manage learning environments that provide students with the time, space, and resources needed for learning science. In doing this, teachers

- Structure the time available so that students are able to engage in extended investigations.

- Create a setting for student work that is flexible and supportive of science inquiry.

- Ensure a safe working environment.

- Make the available science tools, materials, media, and technological resources accessible to students.

- Identify and use resources outside the school.

- Engage students in designing the learning environment.

Teaching Standard E:
Teachers of science develop communities of science learners that reflect the intellectual rigor of scientific inquiry and the attitudes and social values conducive to science learning. In doing this, teachers

- Display and demand respect for the diverse ideas, skills, and experiences of all students.

- Enable students to have a significant voice in decisions about the content and context of their work and require students to take responsibility for the learning of all members of the community.

- Nurture collaboration among students.

- Structure and facilitate ongoing formal and informal discussion based on a shared understanding of rules of scientific discourse.

- Model and emphasize the skills, attitudes, and values of scientific inquiry.

Teaching Standard F:
Teachers of science actively participate in the ongoing planning and development of the school science program. In doing this, teachers

- Plan and develop the school science program.

- Participate in decisions concerning the allocation of time and other resources to the science program.

- Participate fully in planning and implementing professional growth and development strategies for themselves and their colleagues.

Wisconsin's Model Academic Standards for Science Content Standards

A. Science Connections

CONTENT STANDARD
Students in Wisconsin will understand that among the science disciplines there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; and form and function.

B. Nature of Science

CONTENT STANDARD
Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.

C. Science Inquiry

CONTENT STANDARD
Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others.

D. Physical Science

CONTENT STANDARD
Students in Wisconsin will demonstrate an understanding of the physical and chemical properties of matter, the forms and properties of energy, and the ways in which matter and energy interact.

E. Earth and Space Science

CONTENT STANDARD
Students in Wisconsin will demonstrate an understanding of the structure and systems of the earth and other bodies in the universe and their interactions.

F. Life and Environmental Science

CONTENT STANDARD
Students in Wisconsin will demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment.

G. Science Applications

CONTENT STANDARD
Students in Wisconsin will demonstrate an understanding of the relationship between science and technology and the ways in which that relationship influences human activities.

H. Science in Social and Personal Perspectives

CONTENT STANDARD
Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live.

Content Guidelines For
Economics

Economics teachers will demonstrate knowledge of and skill in:

1. The history, organization, conceptual framework, modes of inquiry, ethics and current research and methodologies of the discipline within the *Wisconsin Model Academic Standards for the Social Studies*.

2. The major themes, basic principles, philosophic bases, ethics, assumptions, perspectives and schools of thought of the discipline.

3. The practical applications of the methodology appropriate to the discipline.

4. The application of knowledge of each discipline to past and present economic, social, cultural, and political events and situations.

5. The skills associated with the discipline including:
   - Communication.
     - Data-gathering.
     - Model building.
     - Problem solving.
     - Policy making.
     - Narrative explanation.
   - Decision-making.
     - Scenario building.
     - Identification of multiple perspectives.
     - The ability to observe, organize, interpret, infer, analyze, question, evaluate, synthesize, form hypotheses, recognize bias, weigh alternatives and develop participatory skills.

6. The interdisciplinary nature and integrative aspects of the discipline in social studies and their connections with disciplines other than social studies.

7. The strategies for conducting investigations and research using multiple primary and secondary sources.

8. The *Wisconsin Model Academic Standards for Social Studies* in order to assess the evidence or assessment of student understanding and develop curriculum.

9. Professional organizations, publications, and resources in social studies.

10. State and national laws and current national leadership initiatives in the discipline.

11. The principles of microeconomics including fundamental concepts and the characteristics of economic systems including market, tradition, and command.

12. The principles of macroeconomics including role of government, fiscal policy, and monetary policy.

13. The principles of money and banking including central banks, financial markets, savings, investing, and personal finance.

14. The American economic systems, its institutions and it historical development.

15. Analyzing persistent economic problems including market and government failures and the application of economic principles to other social issues.

16. The principles of international economics including trade, interdependence, international economic organizations and international exchange.

8/20/01

Content Guidelines For
English as a Second Language

The English as a second language teacher will demonstrate knowledge of and skills in:

1. Language Competence:
   Teachers have a high degree of fluency in English, comprehend the linguistic and paralinguistic features of the English language, and recognize the processes through which languages are acquired in both formal and informal contexts.

2. Developmental, Social, Political, and Cultural Contexts:
   Teachers of English language learners address the developmental, social, political, and cultural contexts of their students' lives and educational experiences. They comprehend how these relate to classroom performance and educational practice.

3. Curriculum, Instruction, and Assessment:
   Teachers employ effective curriculum, instruction, and assessment practices for English language learners and possess knowledge of the content taught in schools.

4. The School Environment:
   Teachers recognize the importance of situating support programs for English language learners within the context of the school and community to ensure their academic success.

5. Professional Development:
   Teachers are reflective practitioners who continually engage in ongoing professional development, networking, research, and innovation (see Standard 9, Wisconsin Teacher Standards). Teachers actively seek out opportunities to grow and contribute professionally.

Content Guidelines For
English Literature and Composition

The English Literature and Composition teacher will demonstrate knowledge of and skill in:

1. The interrelatedness of the language arts: speaking, listening, creating media, responding to media, reading and writing.

2. Using language to fit a variety of audiences and purposes.

3. The developmental processes whereby individuals acquire, understand, and use oral, visual, and written language.

4. The structure and history of the English language including traditional and modern grammars and the integration of these studies within the English Language Arts program.

5. A breadth of literary expression by female and male authors, both classic and contemporary, including a representative body of
    - American literature encompassing works of diverse cultural and ethnic groups;
    - Literature of the British Isles and of other English speaking countries;
    - International literature;
    - Young adult literature.

6. Historic and recent rhetorical theories regarding aims and modes of written and oral discourse, cultural and situational factors, and considerations of audience.

7. Strategies for formulating questions and conducting research using a variety of sources and reporting findings in a variety of formats and media.

8. Representative works of major writers, including Shakespeare.

9. The function and variety of literary forms, including fiction, nonfiction, drama, and poetry.

10. Approaches to analyzing, interpreting, evaluating, and appreciating print and non-print texts, reflecting interactions among reader, text, and context.

11. Writing as a recursive thinking process including prewriting, drafting, revising, editing, publishing, and presenting.

12. Writing, speaking, and creating media for a variety of audiences including technical and professional.

13. A wide repertoire of strategies for teaching reading.

14. Effective listening and viewing in a variety of contexts, including interpersonal, media-related, and social.

15. Various approaches to assessing oral, visual, and written communication such as analytical, holistic, and trait scoring, peer evaluation, self-evaluation, portfolios and conferences.

16. Designing curriculum and instruction within the framework of Wisconsin's Model Academic Standards in English Language Arts and implementing local and state assessment activities based upon those standards.

Draft 2/25/2002

Content Guidelines For Environmental Science

The Environmental Science Teacher will demonstrate knowledge of and skill in:

1. **the fundamental characteristics and goals of environmental education including *the Wisconsin Model Academic Standards for Environmental Education:***
   - **(a)** Define environmental education as a scientific and social endeavor resulting in environmentally responsible behavior
   - **(b)** Recognize that environmental education should:
     1. Consider the environment in its totality
     2. Be a continuous, lifelong process
     3. Be interdisciplinary
     4. Examine issues from a local to global perspective
     5. Focus on current issues, while maintaining a historical perspective
     6. Promote the value of cooperation in solving issues
     7. Allow learners to play a role in planning their learning
     8. Relate environmental sensitivity to the learner's own community in the early years
     9. Facilitate the analysis of environmental issues
     10. Emphasize the complexity of issues and the need for critical thinking to solve them
     11. Utilize diverse environments and a broad array of teaching approaches
     12.
2. **designing and adapting curriculum to meet the interests, knowledge, understandings, abilities, experiences, and developmental level of students consistent with the standards, including:**
   - **(a)** The interactions between the living and non-living elements of the natural environment.
   - **(b)** Energy and its various transformations in physical and biological systems.
   - **(c)** Local, national and global interactions among people and the natural and built environments including:
     1. The historical and philosophical review of interactions between people and the environment.
     2. Renewable and non-renewable resources and the principles of resource management.
     3. The impact of technology on the environment.
     4. The manner in which physical and mental well being is affected by interaction among people and their environments.
     5. The ecological, social, economic, and political implications of a variety of environmental issues such as air, water, land, biodiversity, energy, and population.
3. **teaching competencies in environmental education including:**
   - **(a)** Developing long and short term environmental education learning goals
   - **(b)** Fostering sensory awareness and appreciation

(c) Facilitating outdoor learning opportunities
(d) Developing students questioning and analysis skills
(e) Conducting activities that enhance knowledge of environmental processes and systems
(f) Involving students in analyzing and investigating environmental issues (inquiry, critical thinking, simulation, case studies)
(g) Providing opportunities for students to apply decision and action skills (problem based learning, cooperative learning, service learning, community resource use)
(h) Utilizing classroom safety standards, practices, and procedures both inside and outside the classroom
(i) Selecting and organizing environmental education methods, materials, and strategies that are developmentally appropriate for a designated grade level or level of knowledge
(j) Adapting and responding to individual differences among learners
(k) Assessing student progress and evaluating the effectiveness of their own instruction

4. **Incorporating the study of environment and related issues in content areas being taught by:**
   (a) Linking environmental education curricula to national, state, or local standards with disciplines including science, mathematics, social studies, language arts, family and consumer education, business and marketing, health, and technology
   (b) Working collaboratively for environmental education with colleagues within and across disciplines and grade levels.
   (c) Identifying, creating, and using diverse settings and resources
   (d) Identifying, utilizing, and evaluating environmental education tools, print materials, audiovisual media, technology, and resources from the school/community (including the school yard, laboratory, field settings, community settings, museums, zoos, and demonstration sites).

Content Guidelines For
Family and Consumer Education

The Family and Consumer Education teacher will demonstrate knowledge of and skill in:

1. Various meanings and challenges individuals and families face throughout time and within various cultures and of the importance of the work of the family including:
   - Analyzing the role of families in preparing their members to be responsible, productive, caring and contributing family members, workers, and citizens.
   - Explaining how the work of the family contributes to the development of the individual and society, including meeting members' physical needs, nurturing members' full development throughout life, and contributing to development of a democratic society.
   - Analyzing meanings of the family throughout time and in various cultures.
   - Using the practical reasoning process to address complex and unstructured problems in everyday life.
   - Evaluating the consequences of individual and family action.

2. The theoretical and cultural perspectives, principles, resources, and skills that could be used by the family, particularly in the areas of child and life span human development, personal and family relationships, parenting, consumer economics, food and nutrition, housing, textiles and clothing in a complex, global environment including:
   - Explaining the reciprocal influences among the family, school, workplace, community, and society.
   - Analyzing family structures, functions, relationships, and dynamics across cultures and generations.
   - Relating the developmental changes of individuals across the life span and ways to meet their corresponding physical, emotional, cognitive, social, and moral development needs.
   - Connecting theories, principles, and essential concepts of human development to family and personal life.
   - Explaining the importance of parent-child relations and nurturance throughout the life cycle
   - Using principles, resources, and skills that enhance parenting and child development.
   - Using principles of consumer and family economics, including personal finance, in personal and family life.
   - Explaining the management of human and non-human resources in achieving personal, family, and community goals.
   - Developing knowledge and skills in food selection, preparation, handling, storage, sanitation, and safety for nutritional well-being.
   - Using basic nutritional concepts and resources to promote healthy lifestyle.

- Demonstrating ways to meet personal and family needs and wants for shelter, including finding, selecting, and maintaining suitable housing and the role of aesthetics and design.
- Analyzing the impact of historical, environmental, social, cultural, and technological influences on living environments.
- Demonstrating knowledge and skills related to textiles and clothing, such as consumer aspects, aesthetics and design, and construction.

3. The ability to plan, teach, and evaluate a comprehensive, critical science-based Family and Consumer Education program using a variety of delivery systems including:
   - Designing standards-related Family and Consumer Education programs.
   - Developing Family and Consumer Education programs based on school and department mission and goals, and an understanding of national, state, district, and community perspectives.
   - Creating problem-based curriculum using the subject matter concepts and thinking processes of Family and Consumer Education.
   - Planning the involvement of parents, business, industry, and other community representatives as active partners in creating Family and Consumer Education school-based, work-based, and community-based learning opportunities, including service learning.
   - Incorporating the Family, Career and Community Leaders of America (FCCLA) career and technical student organization activities in curriculum planning.
   - Coordinating work-based learning programs, including the skills involved in Child Care Services, Family and Community Services, Food Service, and related cooperative education programs.
   - Investigating spending plans used in Family and Consumer Education programs.
   - Using marketing strategies to recruit and retain students in Family and Consumer Education programs.
   - Investigating ways to articulate Family and Consumer Education programs with related post-secondary programs.
   - Applying the standards of effective practice in teaching students through a variety of pre-clinical and clinical experiences with K-12 students.
   - Creating learning experiences that encourage students to integrate knowledge, skills, and methods of inquiry from several subject areas to address significant individual and family concerns.
   - Connecting school-based learning experiences with everyday life, the workplace, and other areas of study.
   - Using laboratory management principles.
   - Using technology, alternative instructional strategies and materials to meet individual differences in student learning needs.
   - Integrating methods and resources appropriate for K-12 students with special needs into the Family and Consumer Education classroom.

4. The educational purposes, principles, and methods of Family and Consumer Education at K-12 levels including their relationship to the physical, social, emotional, moral, and cognitive development of K-12 students.

5. The application and integration of basic communication skills, language arts, social sciences, science, mathematics, and information and technology literacy in the Family and Consumer Education curriculum.

6. Global economics and economic institutions in the United States, such as business, industrial, labor and agricultural operations and organizations and their role in local, state, national, and international economy; entrepreneurship and entrepreneurial skills; consumer and family economics and the role of citizens in local, state, national, and international economy including:
   - Evaluating the reciprocal influences of economic institutions on the family, work, and community.
   - Analyzing the effects of political, social, and technological change on the family.

7. Career exploration and development, along with employability skills and attitudes needed in Family and Consumer Services including:
   - Applying the career decision-making process, including self-assessment, career investigation, workplace expectations, goal setting, and work-based learning strategies to enhance K-12 students' career development and lifelong learning.
   - Analyzing the impact of technology, interpersonal skills, and the global economy on Family and Consumer Education careers.

Rev. June 2001

Content Guidelines For
Foreign Language

The Foreign Language teacher will demonstrate knowledge of and skills in:

1. Interpersonal communication including:
   - Minimum oral proficiency at a level equivalent to Intermediate High on the ACTFL Proficiency Scale.
   - Strategies for initiating, maintaining, extending, and advancing conversation.
   - Strategies to check for understanding and to ask for clarification.
   - Delivering instruction primarily in the target language, ensuring accurate modeling of the second language and providing multiple ways to make the input comprehensible.
   - Design of assessment and instruction to measure and develop students' interpersonal communication skills.

2. Interpretive communication including:
   - Knowledge of roots and affixes, word family analysis/etymology, and sociocultural requirements applied to a variety of text formats.
   - Processes for learning to read and listen with understanding.
   - Familiarity with a wide variety of authentic materials (oral, written, and viewed) and how they can be used successfully in the foreign language classroom by adjusting the comprehension tasks for beginning through advanced students.
   - Design of assessment and instruction to measure and develop students' interpretive communication skills, guiding students to use prediction, context clues, and inferences for comprehension.

3. Presentational communication including:
   - Demonstration of grammatical accuracy in oral and written expression.
   - Demonstration of accurate pronunciation in oral expression and of sufficient knowledge to help students improve their pronunciation.
   - Narration in written form at least equal to one's oral ability (roughly equivalent to the characteristics of Intermediate-High on the ACTFL scale).
   - Adapting oral and written presentational styles to one's audience and purposes, ranging from the informal to the formal.
   - Design of assessment and instruction to measure and develop students' presentational skills, including strategies for priming students for telling stories and strategies for guiding students through the writing process in their second language.

4. Cultural practices and perspectives including:
   - Experiencing a period of language immersion in residence in a country in which the language is spoken (or a substitution that requires a comparable degree of language and culture immersion) and documenting the resulting increase in cultural knowledge and improved proficiency in the language.

- Daily living patterns, societal structures, institutions, and value systems of a variety of countries that speak the language being studied.
- Cultural practices such as religious celebrations, historical events, and rites of passage of a variety of countries that speak the language being studied.
- How various forces have shaped perspectives of the target cultures.
- Design of assessment and instruction to measure and develop students' knowledge of cultural practices and perspectives, including how to observe, discuss, research, and reflect upon daily living patterns, societal structures, institutions, and value systems.

5. Cultural products and perspectives including:
   - Historical, geographical, political, socioeconomic, literary, and artistic features of a culture.
   - The role and significance of other cultures on the target cultures and of the target cultures on other cultures (today and in the past).
   - Design of assessment and instruction to measure and develop students' knowledge of cultural products and perspectives, including methods to connect the learning of culture with communicative practice.

6. Language connections across disciplines including:
   - Accessing resources in the target language and from the target cultures on topics being discussed or researched from the general curriculum in other classes in the school.
   - Design of assessment and instruction that measure and use topics and skills from other subject areas as the context for language learning and practice.

7. Language connections to add perspectives including:
   - Information about and perspectives from the target culture(s) that can be related to different subject areas in the school curriculum (e.g. cultural attitudes toward environmental, political, social, and personal issues).
   - Design of strategies to encourage students' to bring the knowledge and skill learned in the language classroom to bear on learning in other subject areas, including strategies to help students make personal connections across disciplines through the study and use of another language.

8. Language comparisons including:
   - Second language analysis (vocabulary, sound systems, and structures) with comparisons and contrast to English.
   - Second language acquisition theory and research, including implications for the language classroom.
   - Design of assessment and instruction to measure and develop students' use of the target language for real communication, including strategies to apply knowledge about the language to skill at using the language.

9. Cultural comparisons including:
    - Historical, geographical, political, socioeconomic, literary, and artistic features of a culture.
    - Characteristics of the cultures of speakers of other languages in the United States.
    - Ways to use the language skills students bring to the classroom (as native speakers, heritage speakers, or through prior experiences).
    - Design of assessment and instruction to measure and develop students' understanding of cultural similarities and differences, including strategies for helping students create valid cultural comparisons (moving away from stereotypes).

10. Communities for practical applications including:
    - Resources (including technology) to connect the classroom to native speakers locally and around the world.
    - Demonstrating strategies for adapting learning to the widest possible range of ages, learning styles, and ability levels, including incorporating native speakers into the classroom, motivating and challenging them.
    - Design of assessment and instruction to measure and develop students' ability to explore the resources of the culture(s) within their community and to use the language within the local and global community.

11. Communities for personal enrichment including:
    - Plan for and demonstrate the use of technology and various media to bring authentic materials to the classroom to achieve clear language learning goals.
    - Applying knowledge learned from participating in workshops, seminars, and/or conferences of professional language and/or teaching organizations and planning ongoing professional development.
    - Design of activities to measure the impact of identified factor(s) on language learning and evaluating the results of changes made in one's own teaching techniques (action research).

12. A basic understanding of linguistics and second language acquisition, including:
    - Basic principles of and research on theories of second language acquisition.
    - Demonstrate an understanding of the various linguistic elements (phonology, morphology, syntax, semantics, register, and pragmatics) and their interaction with social, cultural, and psychological factors in the language learning classroom.
    - Demonstrate an understanding of both first and second language development and their interrelationship (including language interference and strategies for error correction tailored to the learner).
    - Demonstrate the use of developmentally appropriate first language literacy strategies in the second language classroom and an understanding of the connection between first and second language literacy.

13. Lesson preparation and teaching performance, including:
    - Applying an understanding of the theoretical principles of a variety of teaching strategies to produce the desired learning outcomes.
    - Making critical curriculum decisions.
    - Selecting, preparing, adapting, and evaluating instructional and assessment materials.
    - Developing, sequencing, and implementing creative and communicative learning activities that integrate language, culture, and content.
    - Evaluating effectively the total teaching-learning process, including continuous self-assessment and student assessment related to learner goals.

Content Guidelines For Geography

Geography teachers will demonstrate knowledge of and skill in:

1. The history, organization, conceptual framework, modes of inquiry, ethics and current research and methodologies of the discipline within the *Wisconsin Model Academic Standards for the Social Studies*.

2. The major themes, basic principles, philosophic bases, ethics, assumptions, perspectives and schools of thought of the discipline.

3. The practical applications of the methodology appropriate to the discipline.

4. The application of knowledge in the discipline to past and present economic, social, cultural, and political events and situations.

5. The skills associated with the discipline including:
   - Communication.
     - Data-gathering.
     - Model building.
     - Problem solving.
     - Policy making.
     - Narrative explanation.
   - Decision-making.
     - Scenario building.
     - Identification of multiple perspectives.
     - The ability to observe, organize, interpret, infer, analyze, question, evaluate, synthesize, form hypotheses, recognize bias, weigh alternatives and develop participatory skills.

6. The interdisciplinary nature and integrative aspects of the discipline in social studies and its connections with other disciplines.

7. The strategies for conducting investigations and research using multiple primary and secondary sources.

8. The *Wisconsin Model Academic Standards for Social Studies* in order to assess the evidence or assessment of student understanding and develop curriculum.

9. Professional organizations, publications, and resources in social studies.

10. State and national laws and current national leadership initiatives in the discipline.

11. Constructing, using and refining mental maps of locales, regions, and the world that demonstrate their understanding of relative location, direction, size and shape.

12. Creating, interpreting, using and distinguishing various representation of Earth such as maps, globes and photographs, and use appropriate geographic tools such as atlases, data bases, systems, charts, graphs, and maps to generate, manipulate, and interpret information, computer generated information aerial and satellite images and three dimensional models.

13. Estimating and calculating distance, scale, area and density to distinguish spatial distribution patterns.

14. Locating, distinguishing, describing the relationships among varying regional and global patterns of geographic phenomena such as landforms, climate and natural resources.

15. Physical system changes and their impacts on humans both locally and globally.

16. How people create places from the interplay of culture, human needs, systems of values and ideals, and government policies.

17. Examining, interpreting and analyzing the interactions of human beings and their physical environments.

18. The ways Earth' physical features have changed over time; and describe and assess the ways historical events have influenced and have been influenced by physical and human geographic features.

19. Analyzing social and economic effects of environmental changes and crises.

20. Comparing, and evaluating existing alternative uses of resources and land use in communities, regions, nations, and the world.

21. The changes caused by past decisions which have altered the spatial arrangement of their local communities and to speculate about the impacts of current discussions which may cause change to the community.

8/20/01

Content Guidelines For
Health

The Health teacher will demonstrate knowledge of and skills in:

1. Articulating a philosophy consistent with current research findings and best practices in health education, curriculum and instructional design, assessment and professional development.

2. Assessing individual, family and community needs to help formulate effective plans to implement quality comprehensive health instruction.

3. Using the concepts and skills contained in the current state and national health standards in the development of curriculum, instruction, and assessments.

4. Planning effective comprehensive health instruction with special emphasis on making curricular connections to effectively integrate health content into multiple disciplines.

5. Designing instructional programs based on a sound mission statement with stated goals and objectives that reflect the definition and intent of comprehensive health instruction.

6. Selecting unit or course content in health instruction based on the goals and objectives appropriate to various health content organizers such as CDC guidelines, major health content strands, or school district plans.

7. Collaborating with community agencies to provide age appropriate health instruction and supportive instructional materials.

8. Evaluating commercial health education programs utilizing the best practices principals in curriculum, instruction, and assessment as listed in guideline number 9.

9. Evaluating the impact and effectiveness of a comprehensive health instruction program, including the use of student performance assessments.

10. Coordinating a comprehensive health content and instruction program that takes into account the best practices in health curriculum, instruction, and assessment. These best practices include:
    - Being accurate and up-to-date.
    - Presenting age appropriate knowledge and skills utilizing multiple instructional strategies.
    - Presenting clear and consistent health messages.
    - Connecting health instruction to parents and/or the community at large.
    - Presenting norms as essential in shaping beliefs, attitudes, and behaviors.
    - Conducting an in depth exploration of critical health issues.

- Emphasizing key concepts such as influences, consequences, safety, and responsibility that cut across many health and safety issues.

11. Acting as a resource person for the school building or district within the comprehensive school health program.

12. Communicating health needs, concerns, and resources within a comprehensive school health program.

13. Advocating for Wisconsin's Comprehensive School Health Program as a school district initiative to help develop healthy, resilient, successful learners.

14. Incorporating the following instructional knowledge and skills appropriate to health instruction necessary to teach children and youth the means to achieve health literacy as identified in the following Wisconsin Academic Standards for Health Education:
    - Develop concepts related to health promotion and disease prevention.
    - Practice behaviors to promote health, prevent disease, and reduce health risks.
    - Use goal-setting and decision-making skills to enhance health.
    - Access valid health information and services.
    - Analyze the impact of culture, media, technology and other factors on health.
    - Use effective interpersonal communication skills to enhance health.
    - Advocate for personal, family, school and community health.

15. Incorporating the biological, behavioral, and social sciences emphasizing the importance of balance in the emotional, physical, intellectual, and social dimensions of human growth and development.

16. Applying a continuous instruction improvement plan for comprehensive school health instruction through such strategies as an external committee review, external school-community health council review, identification and use of standards for program evaluation, and participation in professional organizations such as the Wisconsin Association for Health, Physical Education, Recreation, and Dance.

17. Identifying the role, function, and responsibility of a health education teacher through clinical student teaching experiences.

Draft revision 10/23/01

Content Guidelines For History

History teachers will demonstrate knowledge of and skill in:

1. The history, organization, conceptual framework, modes of inquiry, ethics and current research and methodologies of the discipline within the *Wisconsin Model Academic Standards for the Social Studies*.

2. The major themes, basic principles, philosophic bases, ethics, assumptions, perspectives and schools of thought of the discipline.

3. The practical applications of the methodology appropriate to the discipline.

4. The application of knowledge of the discipline to past and present economic, social, cultural, and political events and situations.

5. The skills associated with the discipline including:
   - Communication.
     - Data-gathering.
     - Model building.
     - Problem solving.
     - Policy making.
     - Narrative explanation.
   - Decision-making.
     - Scenario building.
     - Identification of multiple perspectives.
     - The ability to observe, organize, interpret, infer, analyze, question, evaluate, synthesize, form hypotheses, recognize bias, weigh alternatives and develop participatory skills.

6. The interdisciplinary nature and integrative aspects of the disciplines in social studies and its connections with other disciplines.

7. The strategies for conducting investigations and research using multiple primary and secondary sources.

8. The *Wisconsin Model Academic Standards for Social Studies* in order to assess the evidence or assessment of student understanding and develop curriculum.

9. Professional organizations, publications, and resources in social studies.

10. State and national laws and current national leadership initiatives in the discipline.

11. Tracing and analyzing chronological periods and identifying the relationships of significant social, political, and economic themes and key concepts including

multiple perspectives and historical and contemporary viewpoints in United States history and western and non-western history from antiquity to modern time as identified in the *Wisconsin Model Academic Standards for Social Studies.*

12. Conducting historical research and analysis using primary and secondary sources and historiographic themes to construct historical arguments.

13. Applying historical knowledge to current issues, situations and events in the world.

14. The role of change brought about by technological, philosophic, religious, cultural, political, and economic forces.

15. The interaction of global and national interests in the modern world.

16. How historical knowledge and the concept of time are socially influenced constructions that lead historians to be selective in the questions asked and the evidence used.

Content Guidelines For Journalism

The Journalism teacher will demonstrate knowledge of and skill in:

1. The structure and function of American mass media* with particular emphasis on Journalism including:
   - The history and evolution of mass media.
   - The theories of mass communication.
   - Mass media in the context of the American economic system.
   - Mass media in the context of the American political system.
   - Mass media in the context of the American social system.
   - Journalism as part of the American mass media.

2. The similarities and differences among media including:
   - The functions of informing, persuading, advocating, and entertaining.
   - The forms of news and information, commentary and advocacy, advertising and persuasion, and entertainment.
   - Style and message construction for newspapers, magazines, radio, television, and film.

3. The diversity of audiences' needs, interests, motivations, abilities, backgrounds, and cultures.

4. The process of Journalism including:
   - The stages of information gathering; verification; creating the story in words, images, graphics, or sounds; editing, and production.
   - Researching and gathering information (verbal and visual) required to create the story in words, images, graphics, or sounds.
   - The design of product appropriate to the medium and situation.
   - The use of language appropriate to a variety of audiences and purposes.
   - Integrating visual and verbal material for various media including: newspapers, magazines, radio, television, and film.

5. The essential Journalism norms of fairness, accuracy, and balance.

6. The rights and responsibilities of Journalism including:
   - Rights under the US Constitution First Amendment and state law, particularly regarding student media.
   - Court decisions.

---

* (Meaning the forms of communication designed and distributed to reach an audience by various means: print, broadcast, cable, film, internet, and other forms. The audience may be relatively heterogeneous or homogeneous, narrow or broad)

- Libel, slander, and copyright laws; right of privacy; commercial speech and broadcast regulation; plagiarism; fabrication; and open record and open meeting laws.
- Professional codes of ethics.

7. The role and function of the advisor including:
   - Rights and responsibilities.
   - Staff organization.
   - Budgeting, financing, and relationships with vendors.
   - Production technology.
   - Relationships with faculty, administration, parents, and the community.
   - Post production evaluation techniques, including use of rating services.

8. The relevant careers in Journalism and related media:
   - Education requirements.
   - Sources of additional information.

Content Guidelines For
Life & Environmental Science Including Biology and Environmental Studies

The teacher of Life and Environmental Science including Biology and Environmental Studies will demonstrate knowledge of and skill in:

Professional Development Standard A:

Professional development for teachers of science requires learning essential science content through the perspectives and methods of inquiry. Science learning experiences for teachers must

- Involve teachers in actively investigating phenomena that can be studied scientifically, interpreting results, and making sense of findings consistent with currently accepted scientific understanding.

- Address issues, events, problems, or topics significant in science and of interest to participants.

- Introduce teachers to scientific literature, media, and technological resources that expand their science knowledge and their ability to access further knowledge.

- Build on the teacher's current science understanding, ability, and attitudes.

- Incorporate ongoing reflection on the process and outcomes of understanding science through inquiry.

- Encourage and support teachers in efforts to collaborate.

Professional Development Standard B:

Professional development for teachers of science requires integrating knowledge of science, learning, pedagogy, and students; it also requires applying that knowledge to science teaching. Learning experiences for teachers of science must

- Connect and integrate all pertinent aspects of science and science education.

- Occur in a variety of places where effective science teaching can be illustrated and modeled, permitting teachers to struggle with real situations and expand their knowledge and skills in appropriate contexts.

- Address teachers' needs as learners and build on their current knowledge of science content, teaching, and learning.

- Use inquiry, reflection, interpretation of research, modeling, and guided practice to build understanding and skill in science teaching.

Professional Development Standard C:

Professional development for teachers of science requires building understanding and ability for lifelong learning. Professional development activities must

- Provide regular, frequent opportunities for individual and collegial examination and reflection on classroom and institutional practice.

- Provide opportunities for teachers to receive feedback about their teaching and to understand, analyze, and apply that feedback to improve their practice.

- Provide opportunities for teachers to learn and use various tools and techniques for self-reflection and collegial reflection, such as peer coaching, portfolios, and journals.

- Support the sharing of teacher expertise by preparing and using mentors, teacher advisors, coaches, lead teachers, and resource teachers to provide professional development opportunities.

- Provide opportunities to know and have access to existing research and experiential knowledge.

- Provide opportunities to learn and use the skills of research to generate new knowledge about science and the teaching and learning of science.

Professional Development Standard D:

Professional development programs for teachers of science must be coherent and integrated. Quality preservice and inservice programs are characterized by

- Clear, shared goals based on a vision of science learning, teaching, and teacher development congruent with the *National Science Education Standards*.

- Integration and coordination of the program components so that understanding and ability can be built over time, reinforced continuously, and practiced in a variety of situations.

- Options that recognize the developmental nature of teacher professional growth and individual and group interests, as well as the needs of teachers who have varying degrees of experience, professional expertise, and proficiency.

- Collaboration among the people involved in programs, including teachers, teacher educators, teacher unions, scientists, administrators, policy makers, members of professional and scientific organizations, parents, and business people, with clear respect for the perspectives and expertise of each.

- Recognition of the history, culture, and organization of the school environment.

- Continuous program assessment that captures the perspectives of all those involved, uses a variety of strategies, focuses on the process and effects of the program, and feeds directly into program improvement and evaluation..

Biology—Part 1

The information to follow was developed as a result of *Wisconsin's Model Academic Standards for Science* and based on the *National Science Education Teaching Standards.*

PI 34 Standard 1. Teachers know the subjects they are teaching.

The teacher understands the central concepts, tools of inquiry, and structures of the disciplines he/she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

Teachers of science shall demonstrate knowledge and understandings sufficient to teach subject matter science to students (ages 10-21) in the following areas:

1) Science classroom safety standards, practices, and procedures
2) The interconnectedness of science, science connections
3) Science as inquiry
4) Physical science including physics and chemistry
5) Life science including biology and environmental science
6) Earth and space science
7) Science and technology
8) Science in personal and social perspectives
9) History and nature of science

Teachers of science shall demonstrate abilities to:

1) Understand the central concepts, tool of inquiry, and structures of the discipline he/she teaches
2) **Create learning experiences that make the subject matter meaningful for students.**
3) Select science content consistent with the *Wisconsin's Model Academic Standards in Science* and adapt and design curricula to meet the interests, knowledge, understandings, abilities, and experiences of students.
4) Encourage and model the skills of scientific inquiry, as well as curiosity, openness to new ideas and data, and skepticism.
5) Plan inquiry based science programs.

Biology—Part 2:

The following content has been taken from *Wisconsin's Model Academic Standards for Science* and provide guidelines for a license in biology.

Teachers must have sufficient background content knowledge in order to teach biology or life science by knowing about

- ❖ The characteristics of organisms,
- ❖ Life cycles of organisms,
- ❖ Organisms and their environment,
- ❖ Structure and function of living things,
- ❖ Reproduction and heredity,
- ❖ Regulation and behavior,
- ❖ Populations and ecosystems,
- ❖ Diversity and adaptations of organisms,
- ❖ The cell,
- ❖ The molecular basis of heredity,
- ❖ Biological evolution,
- ❖ The interdependence of organisms,
- ❖ Matter, energy, and organization in living systems, and
- ❖ The behavior of organisms.

PI 34 Standard 2. Teachers know how children grow.
The teacher understands how children learn and develop and can provide learning opportunities that support their intellectual, social, and personal development.

Teachers of science shall demonstrate abilities to:
1) Understand how student learn and develop
2) Provide learning opportunities that support student intellectual, social, and personal development.

PI 34 Standard 3. Teachers understand that children learn differently.

The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners, including students with disabilities.

Teachers of science shall demonstrate abilities to:
1) Understand how students differ in their approaches to learning
2) Creates instructional opportunities that are adapted to diverse learners, including students with disabilities.

3) Recognize and respond to student diversity and encourage all students to participate fully in science learning.

PI 34 Standard 4. Teachers know how to teach.

The teacher understands and uses a variety of instructional strategies, including the use of technology, to encourage students' development of critical-thinking, problem-solving, and performance skills.

Teachers of science shall demonstrate abilities to:

1) Understand and use a variety of instructional strategies, including the use of technology, to encourage students' development of critical thinking, problem solving, and performance skills.
2) Orchestrate discourse among students about scientific ideas.
3) Challenge students to accept and share responsibility for their own learning in science.
4) Create a setting for student work that is flexible and supportive of science inquiry.
5) Nurture collaboration among students.
6) Structure and facilitate ongoing formal and informal discussions based on shared understanding of rules of scientific discourse.
7) Model and emphasize the skill, attitudes, and values of scientific inquiry.
8) Focus and support inquiry while interacting with students.

PI 34 Standard 5. Teachers know how to manage a classroom.

The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

Teachers of science shall demonstrate abilities to:

1) Understand individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning and self-motivation.
2) Develop a framework of year long and short-term science learning goals for students.
3) Plan a school science program.
4) Ensure a safe science classroom
5) Structure the time available so students can engage in extended investigations.
6) Create a setting for student work that is flexible and supportive of science inquiry
7) Manage science tools, materials, media, and technological resources.
8) Identify and use resources outside the school.
9) Engage students in designing a learning environment.

PI 34 Standard 6. Teachers communicate well.

The teacher uses knowledge of effective verbal and nonverbal communication techniques as well as instructional media and technology to foster active inquiry, collaboration, and supportive interaction in the classroom.

Teachers of science shall demonstrate abilities to:
Use knowledge of effective verbal and nonverbal communication techniques as well as instructional media and technology to foster active inquiry, collaboration, and supportive interaction in the classroom.

PI 34 Standard 7. Teachers are able to plan different kinds of lessons.

The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

Teachers of science shall demonstrate abilities to:
1) Plan instruction based on knowledge subject matter, students, the community, and curriculum goals.
2) Use *Wisconsin Model Academic Standards in Science* in the development of lessons.
3) Engage students in designing the learning environment.

PI 34 Standard 8. Teachers know how to test for student progress.

The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.

Teachers of science shall demonstrate abilities to:
1) Understand and use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.
2) Select assessment strategies that support development of student understanding.
3) Use multiple methods to assess student understanding and ability.
4) Systematically gather and analyze assessment data to guide teaching.
5) Guide students in self-assessment.

PI 34 Standard 9. Teachers are able to evaluate themselves.

The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

Teachers of science shall demonstrate abilities to:

1) Be a reflective practitioner who continually evaluates the effectiveness of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.
2) Use student data, observations of teaching, and interactions with colleagues to reflect on and improve teaching practice.
3) Plan and implement professional growth and development strategies.

PI 34 Standard 10. Teachers are connected with other teachers and the community.

The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

Teachers of science shall demonstrate abilities to:

1) Foster relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well being.
2) Use student data, observations of teaching, and interactions with colleagues to report student achievement and opportunities to learn to students, teachers, parents, policy makers, and the general public.
3) Work with colleagues within and across disciplines and grade levels.

Note: The above science teaching abilities were adapted from the National Science Education Teaching Standards, pages 27 through 53 and reprinted here:

Teaching Standard A:
Teachers of science plan an inquiry-based science program for their students. In doing this, teachers

- Develop a framework of yearlong and short-term goals for students.
- Select science content and adapt and design curricula to meet the interests, knowledge, understanding, abilities, and experiences of students.
- Select teaching and assessment strategies that support the development of student understanding and nurture a community of science learners.
- Work together as colleagues within and across disciplines and grade levels.

Teaching Standard B:
Teachers of science guide and facilitate learning. In doing this, teachers

- Focus and support inquiries while interacting with students.
- Orchestrate discourse among students about scientific ideas.
- Challenge students to accept and share responsibility for their own learning.

- Recognize and respond to student diversity and encourage all students to participate fully in science learning.

- Encourage and model the skills of scientific inquiry, as well as the curiosity, openness to new ideas and data, and skepticism that characterize science.

Teaching Standard C:
Teachers of science engage in ongoing assessment of their teaching and of student learning. In doing this, teachers

- Use multiple methods and systematically gather data about student understanding and ability.

- Analyze assessment data to guide teaching.

- Guide students in self-assessment.

- Use student data, observations of teaching, and interactions with colleagues to reflect on and improve teaching practice.

- Use student data, observations of teaching, and interactions with colleagues to report student achievement and opportunities to learn to students, teachers, parents, policy makers, and the general public.

Teaching Standard D:
Teachers of science design and manage learning environments that provide students with the time, space, and resources needed for learning science. In doing this, teachers

- Structure the time available so that students are able to engage in extended investigations.

- Create a setting for student work that is flexible and supportive of science inquiry.

- Ensure a safe working environment.

- Make the available science tools, materials, media, and technological resources accessible to students.

- Identify and use resources outside the school.

- Engage students in designing the learning environment.

Teaching Standard E:
Teachers of science develop communities of science learners that reflect the intellectual rigor of scientific inquiry and the attitudes and social values conducive to science learning. In doing this, teachers

- Display and demand respect for the diverse ideas, skills, and experiences of all students.

- Enable students to have a significant voice in decisions about the content and context of their work and require students to take responsibility for the learning of all members of the community.

- Nurture collaboration among students.

- Structure and facilitate ongoing formal and informal discussion based on a shared understanding of rules of scientific discourse.

- Model and emphasize the skills, attitudes, and values of scientific inquiry.

Teaching Standard F:
Teachers of science actively participate in the ongoing planning and development of the school science program. In doing this, teachers

- Plan and develop the school science program.

- Participate in decisions concerning the allocation of time and other resources to the science program.

- Participate fully in planning and implementing professional growth and development strategies for themselves and their colleagues..

Wisconsin's Model Academic Standards for Science Content Standards

A. Science Connections

CONTENT STANDARD
Students in Wisconsin will understand that among the science disciplines there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; and form and function.

These themes relate and interconnect the Wisconsin science standards to one another. Each theme is further defined in the glossary following the science standards.

B. Nature of Science

CONTENT STANDARD
Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.

C. Science Inquiry

CONTENT STANDARD
Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others.

D. Physical Science

CONTENT STANDARD
Students in Wisconsin will demonstrate an understanding of the physical and chemical properties of matter, the forms and properties of energy, and the ways in which matter and energy interact.

E. Earth and Space Science

CONTENT STANDARD
Students in Wisconsin will demonstrate an understanding of the structure and systems of the earth and other bodies in the universe and their interactions.

F. Life and Environmental Science

CONTENT STANDARD
Students in Wisconsin will demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment.

G. Science Applications

CONTENT STANDARD
Students in Wisconsin will demonstrate an understanding of the relationship between science and technology and the ways in which that relationship influences human activities.

H. Science in Social and Personal Perspectives

CONTENT STANDARD
Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live.

Content Guidelines For
Marketing Education

A Marketing Education teacher will demonstrate knowledge of and skills in:

1. Developing entrepreneurial ventures within the free enterprise system; understanding the challenges that are inherent in beginning a new business and maintaining an existing small business; applying marketing concepts in creating goods, services and idea for consumers; understanding entrepreneurship begins with the attitudes and unique talents associated with that of a risk-taker.

2. Understanding marketing within our free enterprise system; applying economic concepts in developing a competitive advantage in the global economy.

3. Applying marketing concepts and practices in a global economy; understanding that interdependence between nations has created the need to market products, services and ideas effectively to different countries/cultures throughout the world; developing fundamentals necessary to interact comfortably, productively and responsibly with various countries and cultures around the world.

4. Applying and actually experiencing the functions of marketing - distribution, financing, product/service management, marketing information management, pricing, promotion, risk management and selling - in a variety of business settings such as retailing, wholesaling, manufacturing and service industries; understanding that marketing touches the lives of people on a daily basis as family members, consumers and workers; understanding that marketing occupations are found in every segment of our economy.

5. Developing problem solving skills that involve critical and creative thinking; applying these skills to investigate, process, organize and reach conclusions regarding complex issues in the world of work and life; solve marketing related problems as well as creating new and innovative marketing applications.

6. Applying and actually experiencing marketing concepts/activities in specific fields of marketing; participating in current work-based and school based enterprises that provide real-life applications of marketing.

7. Exploring, analyzing and defining how talents, traits and abilities can best be applied to work and life; investigating lifework options; understanding the importance of planning and experience to ensure proper growth and development toward full potential as a worker, family member, and citizen in a democratic system; understand the vast career opportunities related to marketing.

8. Applying appropriate technology to assist in marketing related processes; selecting and using technology processes that lead to informed and quality decision making.

9. Applying the principles of leadership in school, community and marketing-related settings; understanding that marketing activities require a working climate that

fosters creative thought, high employee morale and motivation, sustained cooperation and participation of diverse individuals; understanding the characteristics of organizational leadership; applying concepts and principles of human resource management.

10. Understanding the philosophy, principles, trends, issues, and methods of marketing education at K-12, technical college and collegiate levels.

11. Planning, coordinating, evaluating and administering an occupationally orientated program; planning and conducting advisory committees; coordinating work-based learning, understanding state and federal legislation that impacts marketing education; understanding new and emerging educational programs or initiatives that can affect marketing education programs.

12. Establishing and maintaining the Marketing Education Career and Technical Student Organization, DECA.

13. Understanding the philosophy and objectives of career and technical education (formerly known as vocational education) at all levels.

14. Creating an applied and integrated marketing curriculum for grades K-12; applying and integrating communication skills, social sciences, mathematics and science as they relate to marketing education; understanding the relationship of learning styles to instructional methods and student assessment; developing post-secondary articulation plans.

15. Understanding the importance of involvement in related professional associations such as MEA, WMEA, DECA, and ACTE; demonstrating professional and ethical behavior; understanding the importance of continual participation in professional development activities.

Content Guidelines For Mathematics

The Mathematics teacher will demonstrate knowledge of and skill in:

1. The structures within the discipline, the historical roots and evolving nature of mathematics, and the interaction between technology and the discipline.

2. Facilitating the building of student conceptual and procedural understanding.

3. Helping all students build understanding of the discipline including:
   - Confidence in their abilities to utilize mathematical knowledge.
   - Awareness of the usefulness of mathematics.
   - The economic implications of fine mathematical preparation.

4. Exploring, conjecturing, examining and testing all aspects of problem solving.

5. Formulating and posing worthwhile mathematical tasks, solving problems using several strategies, evaluating results, generalizing solutions, using problem solving approaches effectively, and applying mathematical modeling to real-world situations.

6. Making convincing mathematical arguments, framing mathematical questions and conjectures, formulating counter-examples, constructing and evaluating arguments, and using intuitive, informal exploration and formal proof.

7. Expressing ideas orally, in writing, and visually; using mathematical language, notation, and symbolism; translating mathematical ideas between and among contexts.

8. Connecting the concepts and procedures of mathematics, drawing connections between mathematical strands, between mathematics and other disciplines, and with daily life.

9. Selecting appropriate representations to facilitate mathematical problem solving and translating between and among representations to explicate problem-solving situations.

10. Mathematical processes including:
    - Problem solving.
    - Communication.
    - Reasoning and formal and informal argument.
    - Mathematical connections.
    - Representations.
    - Technology.

11. Number operations and relationships from both abstract and concrete perspectives, identifying real world applications, and representing and connecting mathematical concepts and procedures including:
    - Number sense.
    - Set theory.
    - Number and operation.
    - Composition and decomposition of numbers, including place value, primes, factors, multiples, inverses, and the extension of these concepts throughout mathematics.
    - Number systems through the real numbers, their properties and relations
    - Computational procedures.
    - Proportional reasoning.
    - Number theory.

12. Mathematical concepts and procedures, and the connections among them for teaching upper level number operations and relationships including:
    - Advanced counting procedures, including union and intersection of sets, and parenthetical operations.
    - Algebraic and transcendental numbers.
    - The complex number system, including polar coordinates.
    - Approximation techniques as a basis for numerical integration, fractals, and numerical-based proofs.
    - Situations in which numerical arguments presented in a variety of classroom and real-world situations (e.g., political, economic, scientific, social) can be created and critically evaluated.
    - Opportunities in which acceptable limits of error can be assessed (e.g., evaluating strategies, testing the reasonableness of results, and using technology to carry out computations).

13. Geometry and measurement from both abstract and concrete perspectives and to identify real world applications, and mathematical concepts, procedures and connections among them including:
    - Formal and informal argument.
    - Names, properties, and relationships of two- and three-dimensional shapes.
    - Spatial sense.
    - Spatial reasoning and the use of geometric models to represent, visualize, and solve problems.
    - Transformations and the ways in which rotation, reflection, and translation of shapes can illustrate concepts, properties, and relationships.
    - Coordinate geometry systems including relations between coordinate and synthetic geometry, and generalizing geometric principles from a two-dimensional system to a three-dimensional system.
    - Concepts of measurement, including measurable attributes, standard and non-standard units, precision and accuracy, and use of appropriate tools.

- The structure of systems of measurement, including the development and use of measurement systems and the relationships among different systems.
- Measurement including length, area, volume, size of angles, weight and mass, time, temperature, and money.
- Measuring, estimating, and using measurement to describe and compare geometric phenomena.
- Indirect measurement and its uses, including developing formulas and procedures for determining measure to solve problems.

14. Mathematical concepts, procedures, and the connections among them for teaching upper level geometry and measurement including:
    - Systems of geometry, including Euclidean, non-Euclidean, coordinate, transformational, and projective geometry.
    - Transformations, coordinates, and vectors and their use in problem solving.
    - Three-dimensional geometry and its generalization to other dimensions.
    - Topology, including topological properties and transformations.
    - Opportunities to present convincing arguments by means of demonstration, informal proof, counter-examples, or other logical means to show the truth of statements and/or generalizations.

15. Statistics and probability from both abstract and concrete perspectives and to identify real world applications, and the mathematical concepts, procedures and the connections between them including:
    - Use of data to explore real-world issues.
    - The process of investigation including formulation of a problem, designing a data collection plan, and collecting, recording, and organizing data.
    - Data representation through graphs, tables, and summary statistics to describe data distributions, central tendency, and variance.
    - Analysis and interpretation of data.
    - Randomness, sampling, and inference.
    - Probability as a way to describe chances or risk in simple and compound events.
    - Outcome prediction based on experimentation or theoretical probabilities.

16. Mathematical concepts, procedures, and the connections among them for teaching upper level statistics and probability including:
    - Use of the random variable in the generation and interpretation of probability distributions.
    - Descriptive and inferential statistics, measures of disbursement, including validity and reliability, and correlation.
    - Probability theory and its link to inferential statistics.
    - Discrete and continuous probability distributions as bases for inference.
    - Situations in which students can analyze, evaluate, and critique the methods and conclusions of statistical experiments reported in journals, magazines, news media, advertising, etc.

17. Functions, algebra, and basic concepts underlying calculus from both abstract and concrete perspectives and to identify real world applications, and the mathematical concepts, procedures and the connections among them including:
    - Patterns.
    - Functions as used to describe relations and to model real world situations.
    - Representations of situations that involve variable quantities with expressions, equations and inequalities and that include algebraic and geometric relationships.
    - Multiple representations of relations, the strengths and limitations of each representation, and conversion from one representation to another.
    - Attributes of polynomial, rational, trigonometric, algebraic, and exponential functions.
    - Operations on expressions and solution of equations, systems of equations and inequalities using concrete, informal, and formal methods.
    - Underlying concepts of calculus, including rate of change, limits, and approximations for irregular areas.

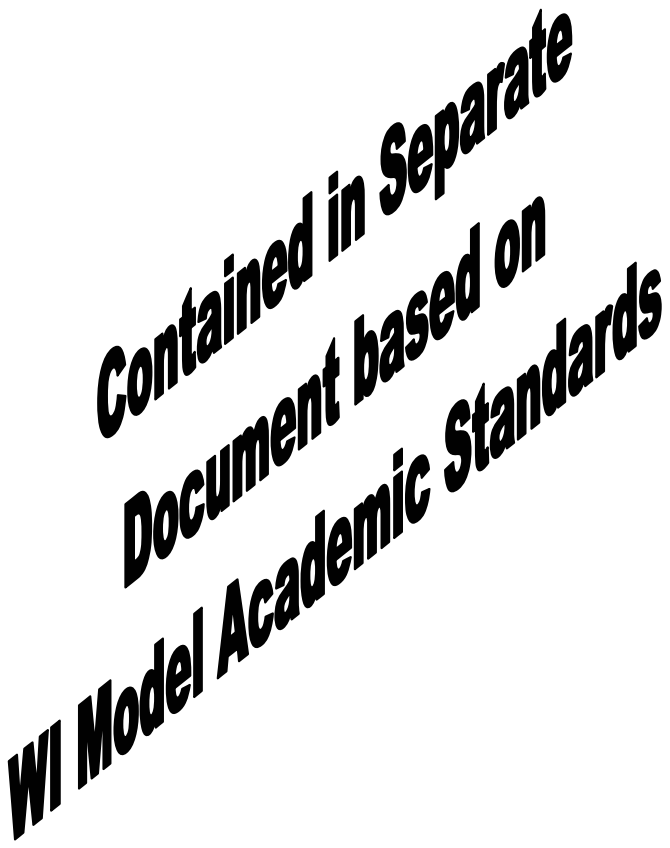
18. Mathematical concepts, procedures, and the connections among them for teaching upper level functions, algebra, and concepts of calculus including:
    - Concepts of calculus, including limits (epsilon-delta) and tangents, derivatives, integrals, and sequences and series.
    - Modeling to solve problems.
    - Calculus techniques including finding limits, derivatives, integrals, and using special rules.
    - Calculus applications including modeling, optimization, velocity and acceleration, area, volume, and center of mass.
    - Numerical and approximation techniques including Simpson's rule, trapezoidal rule, Newton's Approximation, and linearization.
    - Multivariate calculus.
    - Differential equations.

19. Discrete processes from both abstract and concrete perspectives and to identify real world applications, and the mathematical concepts, procedures and the connections among them including:
    - Counting techniques.
    - Representation and analysis of discrete mathematics problems using sequences, graph theory, arrays, and networks.
    - Iteration and recursion.

20. Mathematical concepts, procedures, and the connections among them for teaching upper level discrete mathematics including:
    - Topics, including symbolic logic, induction, linear programming, and finite graphs.
    - Matrices as a mathematical system, and matrices and matrix operations as tools for recording information and for solving problems.

- Developing and analyzing algorithms.

Content Guidelines For
Middle Childhood Through Early Adolescence



Content Guidelines For Music

All teachers of Music will demonstrate knowledge of and skill in:

1. Performing music, including:
   - Performing on the keyboard sufficiently well to employ the instrument as a teaching tool.
   - Using the singing voice in teaching.
   - Performing music from all styles represented in the solo repertory of a major instrument or voice.

2. Conducting, including:
   - Reading and interpreting musical scores and using terminology for teaching perception of the aesthetic qualities of music.
   - Understanding the relationship between the conductor, composer, performer, and audience.

3. Analyzing music, including:
   - Understanding the common elements of music and their relationship.
   - Providing aural and visual analyses of musical scores in order to place them in historical and stylistic perspective.
   - Understanding compositional devices and their effect in performance.
   - Knowing the development and characteristics of specific musical forms, styles, notations, and instruments.
   - Being able to relate historical, social, and artistic developments to music of various periods.
   - Understanding the relationship of music and its principles of form, design, and style to those entities in the other arts.
   - Understanding the relationship between musical perception and aesthetic response.
   - Applying criteria to one's and others' musical products, evaluating those works on the criteria, and determining measures for improvement.
   - Identifying and explaining compositional devices and performance practices in popular music idioms; art and folk music of Western and Non-Western culture; and music of ethnic groups within the United States.

4. Organizing musical sounds, including:
   - Arranging and adapting music from a variety of sources to meet the needs and ability levels of school music ensembles.
   - Using the elements of music to compose and improvise in a variety of styles.

5. Planning and implementing music instruction, including:
   - Stating a philosophy of music education and planning instruction consistent with that philosophy.

- Describing basic goals and objectives for instrumental, vocal, and general music in the school program.
- Designing, creating, and teaching a comprehensive, sequential, and balanced program of music instruction that sets high expectations and is based on the Wisconsin Music Education Standards and the Wisconsin Music Curriculum Guide.
- Creating curriculum and planning instruction with other school staff that connects music with other art forms as well as with other core curricular subjects in order to provide students with interdisciplinary learning experiences.
- Understanding the relationship between learning sequence in music and the physical, psychological, and emotional development of pupils from early childhood through adolescence.
- Designing and using learning environments and instructional models that promote student self-assessment, intrinsic motivation, risk-taking, experimentation, and musical decision-making in the various types of teaching/learning situations in school music programs.
- Constructing or selecting and using appropriate adaptive techniques and strategies to help special needs students achieve musical goals as well as non-musical developmental needs.
- Understanding and using the resources available to help in assessing musical aptitude and achievement.
- Understanding the limitations and demonstrating the construction and appropriate use of the various assessment models and strategies, such as selected response and performance assessments; embedded assessment; check lists and rubrics; and the use of portfolios in instruction/learning and assessment.
- Planning music instruction appropriate to the level of pupil interest, aptitude, and achievement at all levels, early childhood through adolescence.
- Knowing a varied repertoire of music for use with pupil ensembles and groups and a framework for selecting literature that is both qualitative and appropriate for the class setting.
- Understanding the proper selection, care, and use of available music materials and equipment, including current electronic devices for sound generation and modification, and computer technology and software.
- Understanding the organizational and administrative aspects of the school music program.
- Relating music education to other aspects of the school program and to pupils' lives in the community.
- Designing and/or selecting and teaching appropriate music and activities for early childhood students encompassing a balanced program of skills based on singing; beat, rhythm patterns, and meter; listening/ear training; use of simple classroom instruments; improvisation; movement; and singing games.

The Choral Music teacher will demonstrate knowledge of and skill in:

1. Performance, including:
   - Knowing and applying the technical skills needed for artistic self-expression in vocal music.
   - Performing vocal music at sight.
   - Performing vocal music with musical sensitivity and technical proficiency in a solo setting, in small ensembles, and in large ensembles.

2. Conducting, including:
   - Using conducting techniques appropriate to the musical forms and styles performed by pupil choral ensembles.
   - Analyzing performance and, through rehearsal techniques, assisting performers in achieving an accurate and artistic interpretation of choral music.

3. Teaching choral students, including:
   - Understanding the physical growth and educational development of the human voice at all levels, early childhood through adolescence.
   - Transposing and improvising accompaniments on an accompaniment instrument.
   - Understanding the basic techniques of vocal tone production, describing them, and demonstrating them in singing.
   - Using culturally and stylistically appropriate diction in choral performance.
   - Knowing organizational models and using appropriate instructional strategies for improvisational performance in a variety of culturally based settings.

The General Music teacher will demonstrate knowledge of and skill in:

1. Performance, including:
- Knowing and applying the technical skills needed for artistic self-expression.
- Performing music at sight.
- Performing with musical sensitivity and technical proficiency in a solo setting, in small ensembles, and in large ensembles.

2. Conducting, including:
- Knowing and using conducting techniques appropriate to the musical forms and styles performed by pupil ensembles.
- Analyzing performance and, through rehearsal techniques, assisting performers in achieving an accurate and artistic interpretation of the music.

3. Teaching general music students, including:
- Knowing how to explain the basic acoustical processes used to produce tones on traditional instruments.
- Transposing and improvising instrumental accompaniments.

- Performing on various fretted instruments, folk instruments, and rhythmic and melodic percussion instruments in order to employ those instruments as teaching tools.
- Understanding the basic techniques of vocal tone production, describing them, and demonstrating them in singing.
- Understanding the physical growth and educational development of the human voice at all levels, early childhood through adolescence.

The Instrumental Music teacher will demonstrate knowledge of and skill in:

1. Performance skills, including:
   - Knowing and applying the technical skills needed for artistic self-expression in instrumental music.
   - Performing instrumental music at sight.
   - Performing instrumental music with musical sensitivity and technical proficiency in a solo setting, in small ensembles, and in large ensembles.

2. Conducting, including:
   - Using conducting techniques appropriate to the musical forms and styles performed by pupil instrumental ensembles.
   - Analyzing performance and, through rehearsal techniques, assisting performers in achieving an accurate and artistic interpretation of instrumental music.

3. Teaching instrumental music students, including:
   - Having a technical knowledge and ability to perform on a variety of woodwind, brass, string, and percussion instruments sufficiently well to teach elementary, middle, and secondary level pupils effectively.
   - Understanding the care and maintenance of band and orchestral instruments.
   - Knowing how to explain the basic acoustical processes of tone production in traditional instruments.
   - Knowing the organization of and instructional techniques for marching bands.
   - Knowing organizational models and using appropriate instructional strategies for improvisational performance in a variety of instrumental settings.

Content Guidelines For
Physical Education

The teacher of Physical Education will demonstrate knowledge of and skills in:

1. Biological sciences including the structure, function, principles and effects of movement and activity on the human body including demonstrated competence in anatomy, physiology, biomechanics, kinesiology and exercise physiology.
2. Health-related fitness, including practical application in an authentic laboratory setting of physical education.
3. The essential skills and the capacity to teach a wide variety of activities including fundamental motor skills, sports (lifetime, team, individual), movement (creative, rhythms, dance), aquatics and outdoor activities (recreational, experiential).
4. Teaching methods with experiences in organizing, planning, implementing, administering and evaluating a total program of physical education, including curriculum specific to physical education, intramural, recreational and interscholastic activities.
5. Budget development, and the selection, purchase, care and maintenance of facilities, equipment and supplies.
6. Safety procedures.
7. First aid and CPR.
8. Age-appropriate physical training and injury prevention methods.
9. Liability and legal considerations (Title IX, sports law).
10. Pupil conditions which may affect performance in physical education classes including diagnostic methods, teaching techniques, and evaluation and prescriptive programming of pupils whose needs can be met by minor program modification or through specially designed individual programs.
11. The application of the behavioral and social science concepts which have relation to physical education, including foundations, multi-cultural awareness, classroom management, conflict resolution, peer cooperation and mediation, motivational techniques, integration techniques and gender equity.

Draft 7/13/00

Content Guidelines For
Physical Science Including Chemistry

The teacher of Chemistry will demonstrate knowledge of and skill in:

Professional Development Standard A:

Professional development for teachers of science requires learning essential science content through the perspectives and methods of inquiry. Science learning experiences for teachers must

- Involve teachers in actively investigating phenomena that can be studied scientifically, interpreting results, and making sense of findings consistent with currently accepted scientific understanding.

- Address issues, events, problems, or topics significant in science and of interest to participants.

- Introduce teachers to scientific literature, media, and technological resources that expand their science knowledge and their ability to access further knowledge.

- Build on the teacher's current science understanding, ability, and attitudes.

- Incorporate ongoing reflection on the process and outcomes of understanding science through inquiry.

- Encourage and support teachers in efforts to collaborate.

Professional Development Standard B:

Professional development for teachers of science requires integrating knowledge of science, learning, pedagogy, and students; it also requires applying that knowledge to science teaching. Learning experiences for teachers of science must

- Connect and integrate all pertinent aspects of science and science education.

- Occur in a variety of places where effective science teaching can be illustrated and modeled, permitting teachers to struggle with real situations and expand their knowledge and skills in appropriate contexts.

- Address teachers' needs as learners and build on their current knowledge of science content, teaching, and learning.

- Use inquiry, reflection, interpretation of research, modeling, and guided practice to build understanding and skill in science teaching.

Professional Development Standard C:

Professional development for teachers of science requires building understanding and ability for lifelong learning. Professional development activities must

- Provide regular, frequent opportunities for individual and collegial examination and reflection on classroom and institutional practice.

- Provide opportunities for teachers to receive feedback about their teaching and to understand, analyze, and apply that feedback to improve their practice.

- Provide opportunities for teachers to learn and use various tools and techniques for self-reflection and collegial reflection, such as peer coaching, portfolios, and journals.

- Support the sharing of teacher expertise by preparing and using mentors, teacher advisors, coaches, lead teachers, and resource teachers to provide professional development opportunities.

- Provide opportunities to know and have access to existing research and experiential knowledge.

- Provide opportunities to learn and use the skills of research to generate new knowledge about science and the teaching and learning of science.

Professional Development Standard D:

Professional development programs for teachers of science must be coherent and integrated. Quality preservice and inservice programs are characterized by

- Clear, shared goals based on a vision of science learning, teaching, and teacher development congruent with the *National Science Education Standards*.

- Integration and coordination of the program components so that understanding and ability can be built over time, reinforced continuously, and practiced in a variety of situations.

- Options that recognize the developmental nature of teacher professional growth and individual and group interests, as well as the needs of teachers who have varying degrees of experience, professional expertise, and proficiency.

- Collaboration among the people involved in programs, including teachers, teacher educators, teacher unions, scientists, administrators, policy makers, members of professional and scientific organizations, parents, and business people, with clear respect for the perspectives and expertise of each.

- Recognition of the history, culture, and organization of the school environment.

- Continuous program assessment that captures the perspectives of all those involved, uses a variety of strategies, focuses on the process and effects of the program, and feeds directly into program improvement and evaluation..

Chemistry—Part 1

PI 34 Standard 1. Teachers know the subjects they are teaching.

The teacher understands the central concepts, tools of inquiry, and structures of the disciplines he/she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

Teachers of science shall demonstrate knowledge and understandings sufficient to teach subject matter science to students (ages 10-21) in the following areas:

1) Science classroom safety standards, practices, and procedures
2) The interconnectedness of science, science connections
3) Science as inquiry
4) Physical science including physics and chemistry
5) Life science including biology and environmental science
6) Earth and space science
7) Science and technology
8) Science in personal and social perspectives
9) History and nature of science

Teachers of science shall demonstrate abilities to:

1) Understand the central concepts, tool of inquiry, and structures of the discipline he/she teaches
2) **Create learning experiences that make the subject matter meaningful for students.**
3) Select science content consistent with the *Wisconsin's Model Academic Standards in Science* and adapt and design curricula to meet the interests, knowledge, understandings, abilities, and experiences of students.
4) Encourage and model the skills of scientific inquiry, as well as curiosity, openness to new ideas and data, and skepticism.
5) Plan inquiry based science programs.

Chemistry—Part 2:

The following content has been taken from *Wisconsin's Model Academic Standards for Science* and provides guidelines for a chemistry license.

Teachers must have sufficient background content knowledge in order to teach chemistry by knowing about

- Properties of Earth materials,

- Properties and changes of properties in matter,
- Transfer of energy,
- Structures of atoms and matter,
- Chemical reactions,
- Conservation of energy and the increase in disorder, and
- Interactions of matter and energy.

PI 34 Standard 2. Teachers know how children grow.

The teacher understands how children learn and develop and can provide learning opportunities that support their intellectual, social, and personal development.

Teachers of science shall demonstrate abilities to:
1) Understand how student learn and develop
2) Provide learning opportunities that support student intellectual, social, and personal development.

PI 34 Standard 3. Teachers understand that children learn differently.

The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners, including students with disabilities.

Teachers of science shall demonstrate abilities to:
1) Understand how students differ in their approaches to learning
2) Creates instructional opportunities that are adapted to diverse learners, including students with disabilities.
3) Recognize and respond to student diversity and encourage all students to participate fully in science learning.

PI 34 Standard 4. Teachers know how to teach.

The teacher understands and uses a variety of instructional strategies, including the use of technology, to encourage students' development of critical-thinking, problem-solving, and performance skills.

Teachers of science shall demonstrate abilities to:
1) Understand and use a variety of instructional strategies, including the use of technology, to encourage students' development of critical thinking, problem solving, and performance skills.
2) Orchestrate discourse among students about scientific ideas.
3) Challenge students to accept and share responsibility for their own learning in science.
4) Create a setting for student work that is flexible and supportive of science inquiry.
5) Nurture collaboration among students.
6) Structure and facilitate ongoing formal and informal discussions based on shared understanding of rules of scientific discourse.

7) Model and emphasize the skill, attitudes, and values of scientific inquiry.
8) Focus and support inquiry while interacting with students.

PI 34 Standard 5. Teachers know how to manage a classroom.

The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

Teachers of science shall demonstrate abilities to:

1) Understand individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning and self-motivation.
2) Develop a framework of year long and short-term science learning goals for students.
3) Plan a school science program.
4) Ensure a safe science classroom
5) Structure the time available so students can engage in extended investigations.
6) Create a setting for student work that is flexible and supportive of science inquiry
7) Manage science tools, materials, media, and technological resources.
8) Identify and use resources outside the school.
9) Engage students in designing a learning environment.

PI 34 Standard 6. Teachers communicate well.

The teacher uses knowledge of effective verbal and nonverbal communication techniques as well as instructional media and technology to foster active inquiry, collaboration, and supportive interaction in the classroom.

Teachers of science shall demonstrate abilities to:

1) Use knowledge of effective verbal and nonverbal communication techniques as well as instructional media and technology to foster active inquiry, collaboration, and supportive interaction in the classroom.

PI 34 Standard 7. Teachers are able to plan different kinds of lessons.

The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

Teachers of science shall demonstrate abilities to:

1) Plan instruction based on knowledge subject matter, students, the community, and curriculum goals.
2) Use *Wisconsin Model Academic Standards in Science* in the development of lessons.
3) Engage students in designing the learning environment.

PI 34 Standard 8. Teachers know how to test for student progress.

The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.

Teachers of science shall demonstrate abilities to:
1) Understand and use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.
2) Select assessment strategies that support development of student understanding.
3) Use multiple methods to assess student understanding and ability.
4) Systematically gather and analyze assessment data to guide teaching.
5) Guide students in self-assessment.

PI 34 Standard 9. Teachers are able to evaluate themselves.

The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

Teachers of science shall demonstrate abilities to:
1) Be a reflective practitioner who continually evaluates the effectiveness of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.
2) Use student data, observations of teaching, and interactions with colleagues to reflect on and improve teaching practice.
3) Plan and implement professional growth and development strategies.

PI 34 Standard 10. Teachers are connected with other teachers and the community.

The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

Teachers of science shall demonstrate abilities to:
1) Foster relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well being.
2) Use student data, observations of teaching, and interactions with colleagues to report student achievement and opportunities to learn to students, teachers, parents, policy makers, and the general public.
3) Work with colleagues within and across disciplines and grade levels.

Teaching Standard A:
Teachers of science plan an inquiry-based science program for their students. In doing this, teachers
- Develop a framework of yearlong and short-term goals for students.

- Select science content and adapt and design curricula to meet the interests, knowledge, understanding, abilities, and experiences of students.
- Select teaching and assessment strategies that support the development of student understanding and nurture a community of science learners.
- Work together as colleagues within and across disciplines and grade levels.

Teaching Standard B:
Teachers of science guide and facilitate learning. In doing this, teachers
- Focus and support inquiries while interacting with students.
- Orchestrate discourse among students about scientific ideas.
- Challenge students to accept and share responsibility for their own learning.
- Recognize and respond to student diversity and encourage all students to participate fully in science learning.
- Encourage and model the skills of scientific inquiry, as well as the curiosity, openness to new ideas and data, and skepticism that characterize science.

Teaching Standard C:
Teachers of science engage in ongoing assessment of their teaching and of student learning. In doing this, teachers
- Use multiple methods and systematically gather data about student understanding and ability.
- Analyze assessment data to guide teaching.
- Guide students in self-assessment.
- Use student data, observations of teaching, and interactions with colleagues to reflect on and improve teaching practice.
- Use student data, observations of teaching, and interactions with colleagues to report student achievement and opportunities to learn to students, teachers, parents, policy makers, and the general public.

Teaching Standard D:
Teachers of science design and manage learning environments that provide students with the time, space, and resources needed for learning science. In doing this, teachers
- Structure the time available so that students are able to engage in extended investigations.
- Create a setting for student work that is flexible and supportive of science inquiry.
- Ensure a safe working environment.
- Make the available science tools, materials, media, and technological resources accessible to students.
- Identify and use resources outside the school.
- Engage students in designing the learning environment.

Teaching Standard E:
Teachers of science develop communities of science learners that reflect the intellectual rigor of scientific inquiry and the attitudes and social values conducive to science learning. In doing this, teachers

- Display and demand respect for the diverse ideas, skills, and experiences of all students.
- Enable students to have a significant voice in decisions about the content and context of their work and require students to take responsibility for the learning of all members of the community.
- Nurture collaboration among students.
- Structure and facilitate ongoing formal and informal discussion based on a shared understanding of rules of scientific discourse.
- Model and emphasize the skills, attitudes, and values of scientific inquiry.

Teaching Standard F:
Teachers of science actively participate in the ongoing planning and development of the school science program. In doing this, teachers

- Plan and develop the school science program.
- Participate in decisions concerning the allocation of time and other resources to the science program.
- Participate fully in planning and implementing professional growth and development strategies for themselves and their colleagues.

Wisconsin's Model Academic Standards for Science Content Standards

A. Science Connections

CONTENT STANDARD
Students in Wisconsin will understand that among the science disciplines there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; and form and function.

These themes relate and interconnect the Wisconsin science standards to one another. Each theme is further defined in the glossary following the science standards.

B. Nature of Science

CONTENT STANDARD
Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.

C. Science Inquiry

CONTENT STANDARD
Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others.

D. Physical Science

CONTENT STANDARD
Students in Wisconsin will demonstrate an understanding of the physical and chemical properties of matter, the forms and properties of energy, and the ways in which matter and energy interact.

E. Earth and Space Science

CONTENT STANDARD
Students in Wisconsin will demonstrate an understanding of the structure and systems of the earth and other bodies in the universe and their interactions.

F. Life and Environmental Science

CONTENT STANDARD
Students in Wisconsin will demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment.

G. Science Applications

CONTENT STANDARD
Students in Wisconsin will demonstrate an understanding of the relationship between science and technology and the ways in which that relationship influences human activities.

H. Science in Social and Personal Perspectives

CONTENT STANDARD
Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live.

Content Guidelines For
Physical Science Including Physics

The teacher of physics will demonstrate knowledge of and skill in:

Professional Development Standard A:

Professional development for teachers of science requires learning essential science content through the perspectives and methods of inquiry. Science learning experiences for teachers must

- Involve teachers in actively investigating phenomena that can be studied scientifically, interpreting results, and making sense of findings consistent with currently accepted scientific understanding.
- Address issues, events, problems, or topics significant in science and of interest to participants.
- Introduce teachers to scientific literature, media, and technological resources that expand their science knowledge and their ability to access further knowledge.
- Build on the teacher's current science understanding, ability, and attitudes.
- Incorporate ongoing reflection on the process and outcomes of understanding science through inquiry.
- Encourage and support teachers in efforts to collaborate.

Professional Development Standard B:

Professional development for teachers of science requires integrating knowledge of science, learning, pedagogy, and students; it also requires applying that knowledge to science teaching. Learning experiences for teachers of science must

- Connect and integrate all pertinent aspects of science and science education.
- Occur in a variety of places where effective science teaching can be illustrated and modeled, permitting teachers to struggle with real situations and expand their knowledge and skills in appropriate contexts.
- Address teachers' needs as learners and build on their current knowledge of science content, teaching, and learning.
- Use inquiry, reflection, interpretation of research, modeling, and guided practice to build understanding and skill in science teaching.

Professional Development Standard C:

Professional development for teachers of science requires building understanding and ability for lifelong learning. Professional development activities must

- Provide regular, frequent opportunities for individual and collegial examination and reflection on classroom and institutional practice.

- Provide opportunities for teachers to receive feedback about their teaching and to understand, analyze, and apply that feedback to improve their practice.
- Provide opportunities for teachers to learn and use various tools and techniques for self-reflection and collegial reflection, such as peer coaching, portfolios, and journals.
- Support the sharing of teacher expertise by preparing and using mentors, teacher advisors, coaches, lead teachers, and resource teachers to provide professional development opportunities.
- Provide opportunities to know and have access to existing research and experiential knowledge.
- Provide opportunities to learn and use the skills of research to generate new knowledge about science and the teaching and learning of science.

Professional Development Standard D:

Professional development programs for teachers of science must be coherent and integrated. Quality preservice and inservice programs are characterized by

- Clear, shared goals based on a vision of science learning, teaching, and teacher development congruent with the *National Science Education Standards*.
- Integration and coordination of the program components so that understanding and ability can be built over time, reinforced continuously, and practiced in a variety of situations.
- Options that recognize the developmental nature of teacher professional growth and individual and group interests, as well as the needs of teachers who have varying degrees of experience, professional expertise, and proficiency.
- Collaboration among the people involved in programs, including teachers, teacher educators, teacher unions, scientists, administrators, policy makers, members of professional and scientific organizations, parents, and business people, with clear respect for the perspectives and expertise of each.
- Recognition of the history, culture, and organization of the school environment.
- Continuous program assessment that captures the perspectives of all those involved, uses a variety of strategies, focuses on the process and effects of the program, and feeds directly into program improvement and evaluation.

Physics—Part 1

The information to follow was developed as a result of *Wisconsin's Model Academic Standards for Science* and based on the *National Science Education Teaching Standards.*

PI 34 Standard 1. Teachers know the subjects they are teaching.

The teacher understands the central concepts, tools of inquiry, and structures of the disciplines he/she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

Teachers of science shall demonstrate knowledge and understandings sufficient to teach subject matter science to students (ages 10-2) in the following areas:

1) Science classroom safety standards, practices, and procedures
2) The interconnectedness of science, science connections
3) Science as inquiry
4) Physical science including physics and chemistry
5) Life science including biology and environmental science
6) Earth and space science
7) Science and technology
8) Science in personal and social perspectives
9) History and nature of science

Teachers of science shall demonstrate abilities to:

1) Understand the central concepts, tool of inquiry, and structures of the discipline he/she teaches
2) **Create learning experiences that make the subject matter meaningful for students.**
3) Select science content consistent with the *Wisconsin's Model Academic Standards in Science* and adapt and design curricula to meet the interests, knowledge, understandings, abilities, and experiences of students.
4) Encourage and model the skills of scientific inquiry, as well as curiosity, openness to new ideas and data, and skepticism.
5) Plan inquiry based science programs.

Physics—Part 2:

The following content has been taken from *Wisconsin's Model Academic Standards for Science* and provides guidelines for a physic license.

Teachers must have sufficient background content knowledge in order to teach physics by knowing about

- Position and motion of objects,
- Light, heat electricity, and magnetism,
- Properties and changes of properties in matter,
- Motions and forces,
- Transfer of energy,
- Conservation of energy and the increase on disorder, and
- Interactions of matter and energy.

PI 34 Standard 2. Teachers know how children grow.

The teacher understands how children learn and develop and can provide learning opportunities that support their intellectual, social, and personal development.

Teachers of science shall demonstrate abilities to:

1) Understand how student learn and develop
2) Provide learning opportunities that support student intellectual, social, and personal development.

PI 34 Standard 3. Teachers understand that children learn differently.

The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners, including students with disabilities.

Teachers of science shall demonstrate abilities to:

1) Understand how students differ in their approaches to learning
2) Creates instructional opportunities that are adapted to diverse learners, including students with disabilities.
3) Recognize and respond to student diversity and encourage all students to participate fully in science learning.

PI 34 Standard 4. Teachers know how to teach.

The teacher understands and uses a variety of instructional strategies, including the use of technology, to encourage students' development of critical-thinking, problem-solving, and performance skills.

Teachers of science shall demonstrate abilities to:

1) Understand and use a variety of instructional strategies, including the use of technology, to encourage students' development of critical thinking, problem solving, and performance skills.
2) Orchestrate discourse among students about scientific ideas.
3) Challenge students to accept and share responsibility for their own learning in science.
4) Create a setting for student work that is flexible and supportive of science inquiry.
5) Nurture collaboration among students.
6) Structure and facilitate ongoing formal and informal discussions based on shared understanding of rules of scientific discourse.
7) Model and emphasize the skill, attitudes, and values of scientific inquiry.
8) Focus and support inquiry while interacting with students.

PI 34 Standard 5. Teachers know how to manage a classroom.

The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

Teachers of science shall demonstrate abilities to:

1) Understand individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning and self-motivation.
2) Develop a framework of year long and short-term science learning goals for students.
3) Plan a school science program.
4) Ensure a safe science classroom
5) Structure the time available so students can engage in extended investigations.
6) Create a setting for student work that is flexible and supportive of science inquiry
7) Manage science tools, materials, media, and technological resources.
8) Identify and use resources outside the school.
9) Engage students in designing a learning environment.

PI 34 Standard 6. Teachers communicate well.

The teacher uses knowledge of effective verbal and nonverbal communication techniques as well as instructional media and technology to foster active inquiry, collaboration, and supportive interaction in the classroom.

Teachers of science shall demonstrate abilities to:

1) Use knowledge of effective verbal and nonverbal communication techniques as well as instructional media and technology to foster active inquiry, collaboration, and supportive interaction in the classroom.

PI 34 Standard 7. Teachers are able to plan different kinds of lessons.

The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

Teachers of science shall demonstrate abilities to:
1) Plan instruction based on knowledge subject matter, students, the community, and curriculum goals.
2) Use *Wisconsin Model Academic Standards in Science* in the development of lessons.
3) Engage students in designing the learning environment.

PI 34 Standard 8. Teachers know how to test for student progress.

The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.

Teachers of science shall demonstrate abilities to:
1) Understand and use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.
2) Select assessment strategies that support development of student understanding.
3) Use multiple methods to assess student understanding and ability.
4) Systematically gather and analyze assessment data to guide teaching.
5) Guide students in self-assessment.

PI 34 Standard 9. Teachers are able to evaluate themselves.

The teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

Teachers of science shall demonstrate abilities to:
1) Be a reflective practitioner who continually evaluates the effectiveness of his/her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.
2) Use student data, observations of teaching, and interactions with colleagues to reflect on and improve teaching practice.
3) Plan and implement professional growth and development strategies.

PI 34 Standard 10. Teachers are connected with other teachers and the community.

The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

Teachers of science shall demonstrate abilities to:

1) Foster relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well being.
2) Use student data, observations of teaching, and interactions with colleagues to report student achievement and opportunities to learn to students, teachers, parents, policy makers, and the general public.
3) Work with colleagues within and across disciplines and grade levels.

Teaching Standard A:

Teachers of science plan an inquiry-based science program for their students. In doing this, teachers

- Develop a framework of yearlong and short-term goals for students.
- Select science content and adapt and design curricula to meet the interests, knowledge, understanding, abilities, and experiences of students.
- Select teaching and assessment strategies that support the development of student understanding and nurture a community of science learners.
- Work together as colleagues within and across disciplines and grade levels.

Teaching Standard B:

Teachers of science guide and facilitate learning. In doing this, teachers

- Focus and support inquiries while interacting with students.
- Orchestrate discourse among students about scientific ideas.
- Challenge students to accept and share responsibility for their own learning.
- Recognize and respond to student diversity and encourage all students to participate fully in science learning.
- Encourage and model the skills of scientific inquiry, as well as the curiosity, openness to new ideas and data, and skepticism that characterize science.

Teaching Standard C:

Teachers of science engage in ongoing assessment of their teaching and of student learning. In doing this, teachers

- Use multiple methods and systematically gather data about student understanding and ability.
- Analyze assessment data to guide teaching.
- Guide students in self-assessment.
- Use student data, observations of teaching, and interactions with colleagues to reflect on and improve teaching practice.
- Use student data, observations of teaching, and interactions with colleagues to report student achievement and opportunities to learn to students, teachers, parents, policy makers, and the general public.

Teaching Standard D:

Teachers of science design and manage learning environments that provide students with the time, space, and resources needed for learning science. In doing this, teachers

- Structure the time available so that students are able to engage in extended investigations.
- Create a setting for student work that is flexible and supportive of science inquiry.
- Ensure a safe working environment.
- Make the available science tools, materials, media, and technological resources accessible to students.
- Identify and use resources outside the school.
- Engage students in designing the learning environment.

Teaching Standard E:

Teachers of science develop communities of science learners that reflect the intellectual rigor of scientific inquiry and the attitudes and social values conducive to science learning. In doing this, teachers

- Display and demand respect for the diverse ideas, skills, and experiences of all students.
- Enable students to have a significant voice in decisions about the content and context of their work and require students to take responsibility for the learning of all members of the community.
- Nurture collaboration among students.
- Structure and facilitate ongoing formal and informal discussion based on a shared understanding of rules of scientific discourse.
- Model and emphasize the skills, attitudes, and values of scientific inquiry.

Teaching Standard F:

Teachers of science actively participate in the ongoing planning and development of the school science program. In doing this, teachers

- Plan and develop the school science program.
- Participate in decisions concerning the allocation of time and other resources to the science program.
- Participate fully in planning and implementing professional growth and development strategies for themselves and their colleagues.

Wisconsin's Model Academic Standards for Science Content Standards

A. Science Connections

CONTENT STANDARD

Students in Wisconsin will understand that among the science disciplines there are unifying themes: systems, order, organization, and interactions; evidence, models, and

explanations; constancy, change, and measurement; evolution, equilibrium, and energy; and form and function.

These themes relate and interconnect the Wisconsin science standards to one another. Each theme is further defined in the glossary following the science standards.

B. Nature of Science

CONTENT STANDARD
Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.

C. Science Inquiry

CONTENT STANDARD
Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others.

D. Physical Science

CONTENT STANDARD
Students in Wisconsin will demonstrate an understanding of the physical and chemical properties of matter, the forms and properties of energy, and the ways in which matter and energy interact.

E. Earth and Space Science

CONTENT STANDARD
Students in Wisconsin will demonstrate an understanding of the structure and systems of the earth and other bodies in the universe and their interactions.

F. Life and Environmental Science

CONTENT STANDARD
Students in Wisconsin will demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment.

G. Science Applications

CONTENT STANDARD
Students in Wisconsin will demonstrate an understanding of the relationship between science and technology and the ways in which that relationship influences human activities.

H. Science in Social and Personal Perspectives

CONTENT STANDARD
Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live.

Content Guidelines For
Political Science and Citizenship

Political science teachers will demonstrate knowledge of and skill in:

1. The history, organization, conceptual framework, modes of inquiry, ethics and current research and methodologies of the discipline within the *Wisconsin Model Academic Standards for the Social Studies*.

2. The major themes, basic principles, philosophic bases, ethics, assumptions, perspectives and schools of thought of the discipline.

3. The practical applications of the methodology appropriate to the discipline.

4. The application of knowledge of each discipline to past and present economic, social, cultural, and political events and situations.

5. The skills associated with the discipline including:
   - Communication.
     - Data-gathering.
     - Model building.
     - Problem solving.
     - Policy making.
     - Narrative explanation.
   - Decision-making.
     - Scenario building.
     - Identification of multiple perspectives.
     - The ability to observe, organize, interpret, infer, analyze, question, evaluate, synthesize, form hypotheses, recognize bias, weigh alternatives and develop participatory skills.

6. The interdisciplinary nature and integrative aspects of the disciplines in social studies and its connections with other disciplines.

7. The strategies for conducting investigations and research using multiple primary and secondary sources.

8. The *Wisconsin Model Academic Standards for Social Studies* in order to assess the evidence or assessment of student understanding and develop curriculum.

9. Professional organizations, publications, and resources in social studies.

10. State and national laws and current national leadership initiatives in the discipline.

Explaining and analyzing:

- Historical perspectives.
- The nature of different political systems.
- The nature of law.
- Local, state, national tribal, and global political systems.
- Political thought.
- The nature of democratic citizenship.
- Political legitimacy.
- Political parties and political interest groups.
- The nature of political decision-making.
- Political power and authority.
- Ethics.
- International politics.

12. The historical development and interpretation of United States principles, documents, Supreme Court decisions and ideals across time.

13. The federal system and separation of powers at the local, state, national and tribal levels in the United States and compare to ideologies and structures of different political systems.

14. The rights and responsibilities and duties of citizens in communities, nation, and world and their role in defining the common good and influencing public policy.

15. Evaluating the relationships among countries of the world including the role of international organizations.

16. Recognizing the purpose of government and the evolving nature of governments and non-governmental organizations.

Content Guidelines For Psychology

Psychology teachers will demonstrate knowledge of and skill in:

1. The history, organization, conceptual framework, modes of inquiry, ethics and current research and methodologies of the discipline within the *Wisconsin Model Academic Standards for the Social Studies*.

2. The major themes, basic principles, philosophic bases, ethics, assumptions, perspectives and schools of thought of the discipline.

3. The practical applications of the methodology appropriate to the discipline.

4. The application of knowledge of each discipline to past and present economic, social, cultural, and political events and situations.

5. The skills associated with the discipline including:
   - Communication.
     - Data-gathering.
     - Model building.
     - Problem solving.
     - Policy making.
     - Narrative explanation.
   - Decision-making.
     - Scenario building.
     - Identification of multiple perspectives.
     - The ability to observe, organize, interpret, infer, analyze, question, evaluate, synthesize, form hypotheses, recognize bias, weigh alternatives and develop participatory skills.

6. The interdisciplinary nature and integrative aspects of the disciplines in social studies and its connections with other disciplines.

7. The strategies for conducting investigations and research using multiple primary and secondary sources.

8. The *Wisconsin Model Academic Standards for Social Studies* in order to assess the evidence or assessment of student understanding and develop curriculum.

9. Professional organizations, publications, and resources in social studies.

10. State and national laws and current national leadership initiatives in the discipline.

11. The basic structures and function of the brain and central nervous system in dictating their impact on individuals' emotions, ability to learn, attend states of consciousness, motivation, sensation and perception of their environment.

12. The sources of stress, physiological and psychological reactions to stress and strategies for dealing with stress and promoting individual health.

13. Describing human development as a lifelong process comparing stage theories of development (nature/nurture) and exploring sources of individual developmental differences (personality formation, nature of intelligence etc.).

14. Distinguishing between healthy and disordered behavior by explaining the origins, characteristics and major categories of disordered behavior.

15. The practical application and ethical issues involved in contemporary treatment therapies.

8/20/01

Content Guidelines For Sociology

Sociology teachers will demonstrate knowledge of and skill in:

1. The history, organization, conceptual framework, modes of inquiry, ethics and current research and methodologies of the discipline within the *Wisconsin Model Academic Standards for the Social Studies*.

2. The major themes, basic principles, philosophic bases, ethics, assumptions, perspectives and schools of thought of the discipline.

3. The practical applications of the methodology appropriate to the discipline.

4. The application of knowledge of each discipline to past and present economic, social, cultural, and political events and situations.

5. The skills associated with the discipline including:
   - Communication.
     - Data-gathering.
     - Model building.
     - Problem solving.
     - Policy making.
     - Narrative explanation.
   - Decision-making.
     - Scenario building.
     - Identification of multiple perspectives.
     - The ability to observe, organize, interpret, infer, analyze, question, evaluate, synthesize, form hypotheses, recognize bias, weigh alternatives and develop participatory skills.

6. The interdisciplinary nature and integrative aspects of the discipline in social studies and its connections with other disciplines.

7. The strategies for conducting investigations and research using multiple primary and secondary sources.

8. The *Wisconsin Model Academic Standards for Social Studies* in order to assess the evidence or assessment of student understanding and develop curriculum.

9. Professional organizations, publications, and resources in social studies.

10. State and national laws and current national leadership initiatives in the discipline.

11. Describing and applying each of the sociological perspective (functionalist, conflict, and interactionist) methods of social research and the contributions of major theorists in sociology.

12. The key concepts of culture and/or society, socialization and the self and social structure.

13. Distinguishing between primary and secondary groups; peer and primary groups; and recognizing characteristics of informal and formal structures within an organization.

14. Methods of social control and differentiate between deviance and crime.

15. Social stratification and social inequality and its relation to race, ethnicity, gender and age and their relationship to interactions between individuals, groups and institutions in society.

16. Analyzing the function of the social institutions of family, the economy, politics, religion, education, science/technology and arts and entertainment and how they further both continuity and change, meet individual needs, and promote the common good in contemporary and historical settings.

17. Comparing and contrasting the functionalist and conflict perspectives of these institutions.

18. The demographic concepts which influence changes in population such as migration, industrialization, urbanization and suburbanization.

19. The theories and types of collective behavior, social movements and social change.

8/20/01

Content Guidelines For
Speech Communication

The teacher of Speech Communication will demonstrate knowledge of and skill in:

1. The classical and modern development of argumentation and persuasion.
2. Contemporary theories of communication including its purposes, source, setting, audience, subject and media.
3. Verbal and nonverbal communication.
4. Intrapersonal and interpersonal communication.
5. Group communication including structure, dynamics, and roles.
6. Public speaking including invention, organization, style, and delivery.
7. Media and its effects on audiences in social and cultural contexts.
8. Critical response skills in interpersonal, intrapersonal, and public communication contexts.
9. The listening process, methodology, and strategies to improve listening.
10. Communication ethics and individual responsibility associated with competent and effective communication in society.
11. The diverse cultural perspectives in communication including their role and influence on the communication process.
12. The ability to use media to communicate to specific audiences.
13. The development, direction, and evaluation of co-curricular speech activities including the direction of pupil experiences in Debate and Forensics.
14. Communication anxiety and its remediation.

Draft 7/14/00

Content Guidelines For Technology Education

The Technology Education teacher will demonstrate knowledge of and skills in:

1. Articulating a philosophy informed by current research findings in technology education, curriculum and instructional design, assessment and professional development.

2. Designing programs based on a sound mission statement with stated goals and objectives that reflect the definition and intent of technology education.

3. Explaining the development of technology and its effect on people, the environment and culture; industry and its organization, personnel systems, techniques, resources and products; and the impact of technology and industry on society and culture.

4. Categorizing technological concepts, processes, and systems according to various content organizers such as bio-related, construction, energy/power, information/communications, manufacturing, medical, transportation, and other technologies.

5. Articulating and using the concepts, skills, and knowledge contained in current state and national standards for technology education in the development of curriculum and assessments.

6. Relating technology education to other academic disciplines and fields of study including the articulation and integration of technology education across the curriculum.

7. The teaching and technical skills appropriate to technology education including:
   - The use of an organized set of technological concepts, processes and systems when designing course outlines, instructional strategies, and evaluating student work.
   - The development of a strategic program plan that includes a mission statement, rationale for change, goals and objectives, action steps, and program evaluation.
   - The selection of course and/or program content based on the goals and objectives appropriate to various the technology content organizers.
   - The development of lesson plans, the organization of material, and the selection of appropriate instructional strategies to effectively teach in the psychomotor, affective, and cognitive domains of learning.
   - Applying problem-solving and creative abilities involving human and material resources, processes and technological systems.

8. The application of their knowledge, understanding and philosophy of technology education to create and manage a positive, effective learning environment including:

- The identification and incorporation of safe, effective, and appropriate use of contemporary technological tools, instruments, and machines into a program of study.
- The incorporation of insights, knowledge and applications of technological concepts, processes and systems into their instruction.
- The incorporation of skills, creative abilities, positive self-concepts, and individual potentials into their instruction.
- The use of activity oriented laboratory instruction that reinforces abstract concepts through concrete experiences.
- The application of technology to the design and production of activities for student use.
- The development of technology education programs that advance student attitudes, knowledge, and skills related to the functions of technological systems.
- The development of student abilities to apply technological knowledge and skills, and assess new or different past-present-future technology systems.
- The selection of appropriate instructional strategies to effectively teach all student populations.
- The effective management of a technology education laboratory for safety, inventory, filing, requisitioning equipment and materials, maintenance, and budgeting.
- The development and implementation of a behavior management program which defines clear expectations for student conduct.
- Establishing technology related career and technical student organizations such as SkillsUSA-VICA or Technology Student Association as an integral part of the technology education curriculum.
- The management of technological activities in both individual and group settings.
- The application of multicultural, gender, and global perspectives, as well as values and ethics of content issues as they relate to the study of technology.
- The promotion and articulation of technology education to internal and external audiences.
- Relating the study and mastery of technology to lifelong learning and preparation for careers and future education and training.
- The implementation and management of a work-based learning program including the supervision of students.

9. Continuous program improvement, instruction, activities and self through:

    - The development and coordination of an external advisory committee for technology education and student organizations.
    - The identification and use of standards for the evaluation and revision of technology education programs.
    - The participation in related professional organizations for technology education teachers.

Content Guidelines For
Theatre

The teacher of Theatre will demonstrate knowledge of and skill in:

1. Theatre as a social and aesthetic experience and a reflection of culture through history.
2. Theatre through critical reflection of one's own work and the work of others.
3. Advocacy for theatre and other arts programs.
4. The role of theatre within the contexts of school, curriculum, and community.
5. Theatre as a life-long vehicle for creative self-expression, as a career choice, or as an avocation.
6. Interpretation, analysis, and assessment of dramatic texts for acting, directing, and designing.
7. Directing through the creative and collaborative process leading to performance.
8. Acting through developing and sustaining characters in a variety of improvised and scripted scenes and productions.
9. Design as related to the production process.
10. Technical theatre including the creative and safe use of scenery, costumes, lighting, make-up, sound, properties, special effects, and stage equipment.
11. Arts management and development for theatrical productions or other programming.
12. Safety in the teaching and producing of theatre, including acting, directing, and technical theatre.

Draft 7/18/00

Supplementary Programs

Content Guidelines For
Adaptive Education

The teacher of Adaptive Education will demonstrate knowledge of and skills in:

1. **The philosophical, historical and legal foundations of special education including:**
   - The historical perspectives, legislative and litigative history, models, theories, and philosophies that provide the basis for special education practice.
   - The current legislation, regulations, policies, litigation, and ethical issues related to the provision of educational services (e.g., due process, continuum of services, assessment, discipline, inclusive education, supplemental services and supports, specialized health care needs, assistive technology) for students with disabilities.
   - The rights and responsibilities of parents, students, teachers, and other professionals as they relate to student learning needs and educational programs.

2. **The characteristics of learners including:**
   - The emotional/behavioral, physical, cognitive, communication, learning, and social development of all students with disabilities.
   - The various etiologies of medical, psychiatric, neurological, and language disorders and how these impact the emotional/behavioral, physical, cognitive, communication, learning, and social functioning of students with disabilities.
   - The similarities and differences between the emotional/behavioral, physical, cognitive, communication, learning, and social functioning and lifelong planning needs between all students with disabilities and their peers without disabilities and between and among the various areas of impairment for students with disabilities.
   - The similarities and differences between all areas of disabilities, the levels of severity and implications for instruction.
   - The effects various impairments have on the emotional/behavioral, physical, cognitive, communication, learning, and social skills of all students with disabilities.
   - The effects of various medications on the emotional/behavioral, physical, cognitive, communication, learning, and social areas of students with disabilities.

3. **The assessment, diagnosis and evaluation of students including:**
   - The appropriate application and interpretation of formal and informal tests and other evaluation materials.
   - The variety of procedures for identifying students' learning characteristics and needs, monitoring student progress and evaluating learning strategies and instructional approaches.

4. **The instructional content and practice of special education including:**
    - The learning theory and effective research-based instructional strategy application.
    - The curriculum materials and systematic instructional methods for assisting students in developing appropriate communication, affective, and social skills including self awareness, self advocacy, self-determination skills and career, vocational and life skills needed for post school independence.
    - The selection and development of remedial, adaptive, and compensatory content, materials, resources, and strategies appropriate to the student's needs in various learning environments including general education and special education.
    - The selection and use of specialized materials, equipment and technology including assistive technology.
    - The generalization and maintenance of skills across learning environments.
    - The cultural perspectives related to effective instruction for students with disabilities.
    - The evaluation of the effectiveness of instruction and making a responsive adjustment of strategies based on continual observation.

5. **Curriculum planning and managing the learning environment including:**
    - Research-based information on basic classroom management theories, methods and strategies, including how assistive technology can assist with planning and managing the teaching and learning environment.
    - Characteristics of environments (e.g., materials, equipment, and spatial arrangements) that facilitate development, learning, and interaction between and among students.
    - Evaluation, planning and management of procedures that match the learner needs with the instructional environment.
    - Common environmental and personal barriers that hinder accessibility and acceptance of students with disabilities.
    - Effectively designing, structuring and managing daily routines including transition time for students, staff and the instructional setting.
    - Preparing and implementing appropriate lesson plans.

6. **Managing student behavior and social skills/interactions including:**
    - Theories of behavior as they relate to students with disabilities and other students with special needs.
    - Planning, implementing and evaluating group and individual behavior management strategies, that include
        - ♦ Rules, regulations, procedural safeguards including ethics, least intensive intervention and cultural issues.
        - ♦ Problem solving and conflict resolution.

- ♦ Data collection.
- ♦ Classroom routines and rules, and environmental modifications.
- ♦ Generalization and maintenance of skills.
- ♦ Integrating behavior management into the curriculum.
- ♦ Crisis prevention/intervention.
- ♦ Defining target behaviors.
- ♦ Teaching replacement behaviors.
- ♦ Identifying appropriate consequences on a continuum.

- Social skills/interactions, that include
  - ♦ Generalization and maintenance to other settings.
  - ♦ Integration into the curriculum.
  - ♦ Self-awareness, self-control and self-monitoring.

7. Communication and collaborative partnerships including:

- Effective communication and collaborative relationships with parents, students and school and community personnel in a culturally responsive environment.
- Effective communication (oral and written) and collaboration with general education teachers, administrators, parents, and other school personnel when jointly planning, implementing and evaluating education services.
- Ethical practices for confidential communication to others about the learning needs of student with disabilities.

Content Guidelines For
Adaptive Physical Education

The teacher of Adaptive Physical Education will demonstrate knowledge of and skill in:

1. Psychology and nature of the child or youth with a disability, including:
    - Etiology and effects of selected emotional/behavioral, physical, sensory, cognitive, communication, learning, and social functioning of students with disabilities.
    - The special education process.
    - Diversity issues and the interaction of culture and disability.

2. Motor development issues in adaptive physical education, including:
    - Growth and developmental issues regarding motor skill acquisition.
    - Examination of embryology, normal growth expectations, developmental sequences of fundamental skills, various motor development concepts, and atypical motor development.

3. Assessment and program evaluation in adaptive physical education, including:
    - Assessment requirements for the Individual Education Plan (IEP).
    - Current assessment tools for motor development, motor ability, and physical fitness (i.e., formal and informal assessments related to APE).

4. Modification of content, instructional strategies and learning environment in physical education, including:
    - Adaptive physical education pedagogy and curriculum development.
    - Activity selection, curricular development, and program implementation in teaching and other types of recreational and fitness programs.
    - Methods in adapted aquatics.
    - The role of physical education programming for students with mild through severe/profound disabilities.

Content Guidelines For
Assistive Technology

The Assistive Technology teacher will demonstrate knowledge of and skill in:

1. Assistive technology (AT) services and devices including:
   - Legal requirements.
   - Purpose and functional application for students.
   - Features of a variety of assistive technology devices and services and the ability to integrate technology into educational programs (e.g., access, alternative/ augmentative communication, computer-based instruction, mobility, positioning, assistive listening and signaling devices, recreation/leisure/play, vision technology, environmental control, activities of daily living, written language tools, and vocational tools).
   - Proficiency in operating a variety of AT hardware and software.
   - Proficiency in adapting, customizing, and maintaining a variety of AT hardware and software.
   - Identification of assistive technology resources at the building, district, region, community, state and national levels, such as:
   - Funding resources.
   - Print and electronic resources, e.g. books, web sites, journals, list serves.
   - Problem solving, maintenance and repair.

2. Communication and collaborative partnerships including:
   - Understanding the transdisciplinary nature of AT application and the contribution of a variety of disciplines including the child, parents and family members to the assistive technology service delivery process.
   - Ability to listen and respond to input from other team members including coordinating with other therapies, interventions or services.
   - Effective group process skills.
   - Training and technical assistance for school staff, parents, employers and other service providers to ensure maximum utilization of the AT.
   - Collaboration with local education agency technology planning and implementation activities to ensure accessibility.

3. The AT assessment process including:
   - Identifying the need for additional qualified team members to assist in conducting an AT assessment.
   - Determining, in collaboration with other members of the assessment team, assistive technology needs that address all areas related to a student's disability taking into consideration the student's strengths and difficulties, the tasks to be accomplished and the expectations for performance.
   - Using appropriate data gathering procedures and strategies to assess students' performance in customary environments.

- Development of plans to purchase, lease or otherwise acquire the assistive technology identified.
- Development of action plans to implement the use of assistive technology to help students meet the goals in their individualized educational programs.

4. Implementing Assistive Technology including:
   - Using a collaborative approach to ensure AT is available, in working order, and programmed with specific content, if needed, to meet current educational demands.
   - Methods of utilizing AT to maximize the attainment of student goals.
   - Effective training and appropriate utilization of persons who assist students who are using AT.
   - Evaluating, measuring and reporting on the effectiveness of implementation to meet the students' needs and instructional goals.
   - Making changes as required to meet the student's needs.
   - Identifying areas that require further assessment or reevaluation on an ongoing basis.

5. Professional development including:
   - Recognition of the need for ongoing individual professional development and maintaining knowledge of emerging technologies.
   - Participation in staff development opportunities that address identified needs.
   - Identification of staff development needs for others and opportunities that meet needs.
   - Serving as a resource to others for technical assistance and training.

8/31/01

Content Guidelines For
Bilingual-Bicultural Education

The Bilingual Bicultural teacher will demonstrate knowledge of and skill in:

1. Language Competence:
   Teachers have a high degree of fluency in English, comprehend the linguistic and paralinguistic features of the English language, and recognize the processes through which languages are acquired in both formal and informal contexts.

2. Developmental, Social, Political, and Cultural Contexts:
   Teachers of English language learners address the developmental, social, political, and cultural contexts of their students' lives and educational experiences. They comprehend how these relate to classroom performance and educational practice.

3. Curriculum, Instruction, and Assessment:
   Teachers employ effective curriculum, instruction, and assessment practices for English language learners and possess knowledge of the content taught in schools.

4. The School Environment:
   Teachers recognize the importance of situating support programs for English language learners within the context of the school and community to ensure their academic success.

5. Professional Development:
   Teachers are reflective practitioners who continually engage in ongoing professional development, networking, research, and innovation (see Standard 9, Wisconsin Teacher Standards). Teachers actively seek out opportunities to grow and contribute professionally.

6. Linguistic and Cultural Proficiency:
   Teachers have achieved an advanced level of proficiency in the language of the students and a deep understanding of the cultures of the students through intensive experiences.

7. Bilingual Pedagogy:
   Teachers will recognize the purpose and management of dual language instruction, including curriculum design, instructional practice, and assessment.

Content Guidelines For
Gifted And Talented

MISSING

Content Guidelines For
Instructional Library Media Specialist

The Instructional Library Media Specialist will demonstrate knowledge of and skill in:

1. The Wisconsin model academic standards for information and technology literacy, including media and technology, information and inquiry, independent learning, and the learning community.

2. The role of libraries in a democratic society and the interrelationships of all types of libraries and information agencies, including cooperation and networking among libraries.

3. The role of the school library media program within the school environment.

4. An awareness of appropriate local, state, regional, and national professional associations and publications.

5. Communicating effectively with students, faculty, staff, administrators, parents, and other colleagues and the general public including:
   - The maintenance of a positive teaching and learning climate in the library media center.
   - Effective interpersonal relationships within the school and its community.
   - Regular and purposeful communication about the role and services of the school library media program.
   - The collaborative planning of curriculum and lessons with teachers, i.e., the ability to demonstrate an understanding of curriculum objectives, to listen effectively, to use probing and clarifying questions, and to negotiate responsibility for activities.

6. The development of a school library media program dedicated to providing access to information and ideas including:
   - The identification of student and staff information needs.
   - The application of strategies for organizing, disseminating and promoting flexible access to materials that best meet staff and student information needs.
   - The development and monitoring of selection policies that include reevaluation and review procedures that ensure unrestricted access to information and ideas.
   - The recognition of the existence and use of multiple information environments.
   - The development and monitoring of policies that ensure equitable access to all types of resources and technologies within the school environment and beyond.
   - Compliance with the copyright law and guidelines, and advocating compliance.
   - The encouragement of Intellectual Freedom, free inquiry and access to information.

- The development and monitoring of policies that ensure privacy and confidentiality of library/media users.

7. Building and maintaining resource collections that include both internal and external access points to support the educational goals of the school and the personal, developmental and curricular needs of students and teachers including:
   - The development of collection management policies and procedures that employ appropriate criteria for evaluating resources and technology, reflect the school's philosophy, goals, and objectives, and involve teachers in selecting resources for the library media program.
   - The application of appropriate selection criteria to ensure a collection of resources that are appropriate to students' abilities, interests, and needs; reflect the cultural diversity and pluralistic nature of American society; support teaching and learning in all areas of the curriculum; support a variety of instructional strategies and learning styles; and support and encourage spontaneous, creative inquiry by individual students.
   - The implementation of recognized standardized procedures for classifying, cataloging, and processing resources.
   - The maintenance of appropriate electronic systems for collection management and user access.

6. Using technology effectively with students and faculty to facilitate teaching and learning including:
   - The selection, application, and use of appropriate software, hardware, and communications technologies to promote effective teaching and learning.
   - The production of media in graphic, multimedia and electronic formats in support of the library media and instructional programs.
   - Instruction to students and staff in the effective use and production of technology and information resources in multiple formats, both local and remote.

7. Developing, managing, and evaluating school library media programs to meet educational goals including:
   - The application of sound management principles to the administration of the library media program.
   - The interpretation and implementation of state laws and regulations and school district policies and procedures for the management of an effective school library media program.
   - The development of short and long range plans for the school library media program with faculty, administrators, and other library media professionals.
   - The preparation, justification, and administration of the school library media program budget based on instructional program needs and state regulations and policies and funding program requirements.
   - The participation in planning, arranging and using school library media program facilities to support the instructional program.

- Assigning, instructing, and directing support staff, volunteers, and student assistants.
- The participation in evaluation of support staff.
- Assessment of the effectiveness of the library media program in meeting instructional objectives.

8. Serving as a learning facilitator and leader in the development of effective strategies for teaching and learning including:
   - Participation in the curriculum development process at the building level.
   - Collaborative planning with other faculty to provide instructional activities, opportunities and resources that respond to students' learning styles.
   - Collaboration with teachers and instructional technology staff to assure that information and technology literacy is integrated into the curriculum.
   - The planning for development of students' reading, listening, viewing and critical thinking skills.
   - The planning for the development of students' information and technology skills.
   - The motivation and guidance of elementary and secondary students in appreciating literature.
   - The knowledge of children's and young adult literature, including multicultural literature, as well as related media.
   - Collaboration with teachers and instructional technology staff to plan and design instruction and identify and gather appropriate instructional resources.
   - The employment, assessment and monitoring of existing and emerging technologies for possible applications to the instructional program.
   - The clear articulation of the role of the library media program in the educational program.

9. The role, function and responsibilities of a library media specialist through a supervised practicum experience in a school setting at the appropriate level(s).

Content Guidelines For Reading Teachers

Reading Teachers will demonstrate knowledge of and skill in:

1. Language Arts Standards including:
   - Wisconsin Model Academic Standards for English Language Arts.
   - National Standards for the English Language Arts

2. Language Arts Processes including:
   - Language arts processes (reading, writing, speaking, listening, viewing, and representing) interrelationships among them.
   - Interdisciplinary and integrative aspects of language arts processes.
   - Perception of reading as a process of constructing meaning through the interaction of the reader, text, and context of the reading situation.

3. Language Arts Models including:
   - Strengths and weaknesses of various literacy models.

4. Research including:
   - Contributions of literacy scholars to the literacy knowledge base.
   - Research in reading and the language arts, special education, psychology, and other fields that address pupils with reading and learning disabilities.

5. Language including:
   - The nature and structure of language.
   - Language variation.
   - Relationship of language systems (phonemic, morphemic, semantic, syntactic, and pragmatic) to the language arts.

6. Literacy, Language Acquisition, Language Development, Cognition and Learning including:
   - Major theories of literacy, language acquisition, language development, cognition, metacognition, and learning.
   - Developmental process of the language arts (reading, writing, speaking, listening, viewing, and representing) from infancy through middle childhood.
   - Nature and multiple causes of reading disabilities.
   - Major definitions of family literacy and the impact of family structures, functions, relationships, and dynamics on literacy development and educational progress.

7. Literature including:
   - Classic and contemporary literature, fiction and non-fiction, including oral, written and visual forms, at appropriate levels.

8. Sociocultural and Political Aspects of Literacy including:
    - Literacy as a means for shaping and transmitting culture.
    - Relationship between political processes and reading policy.